

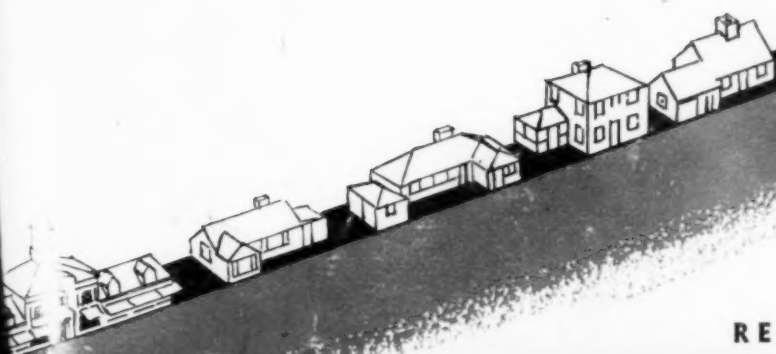
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AMERICAN BUILDER

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BUILDING PAPER

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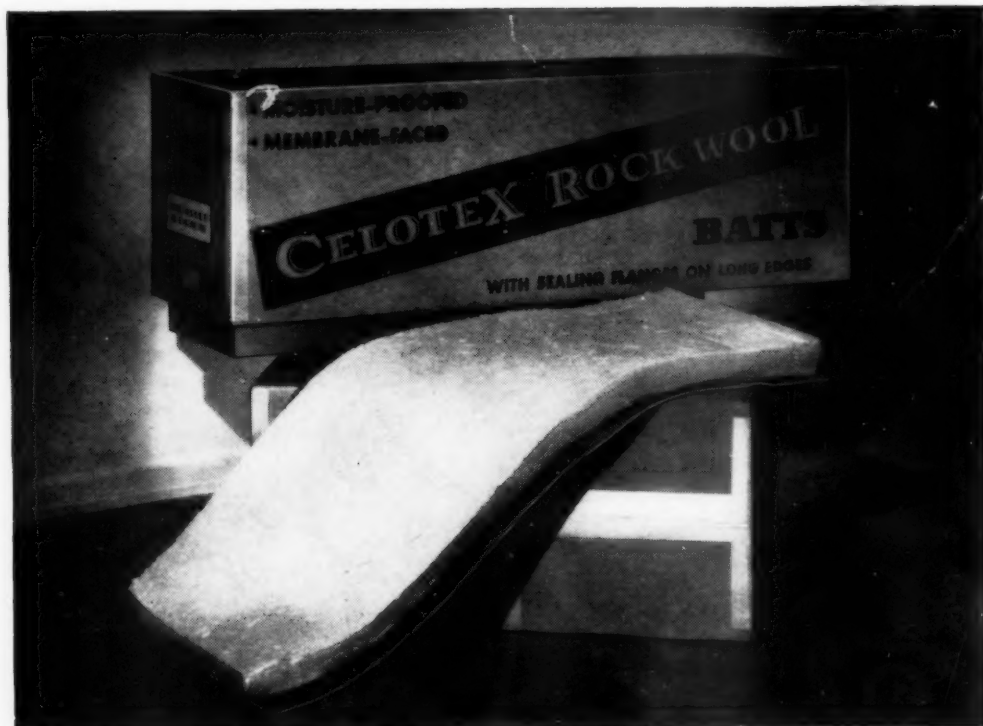
*What's Ahead
for Building?*

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Continents Boardman Publishing Corporation, 105 W. Adams St., Chicago 3, Ill. Subscription price, United States, Possessions and Canada: 1 year, \$10.00; 3 years, \$20.00. Single copies, 25 cents. Entered as second-class matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, with additional entry as second-class matter at Mount Morris, Illinois. Address communications to 105 W. Adams St., Chicago 3, Illinois.

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WALLS

FLOORS

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Building Panels Division
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Detroit 11, Michigan

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Company _____

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101 DISPLACED PERSONS

IN A STRANGE NEW LAND they stood—these displaced persons. Silent men with grim tasks ahead worked purposefully and with little thought of the fatigue that racked their weary bodies. They were building a new community—their community.

Women, hollow-eyed, their white drawn faces mirroring pain, went about setting their humble homes in order. On every side was hunger, privation—the plight of desperate people—"A picture of Europe, 1948?" . . . you ask.

No—a picture of America, 1620.

For here, 101 displaced Pilgrims—men, women and children of the new America—freedom-loving people all, were beginning a new way of life. They were meeting critical shortages, and overcoming them—shortages of all the things that make for decent living—food, clothing, shelter . . . shortages that relatively were the greatest our nation has *ever known*.

There was a 100% shortage of almost everything on that day, 328 years ago, when their storm-battered ship nosed into the quieter waters of rock-studded coastal bays. Yes, a shortage of everything except **COURAGE**—a belief in the dignity of man—a passionate desire on the part of each to live as he liked.

Perhaps it was the strong driving force of the urge to be free men that enabled them to solve the critical shortages of their day. For you see, no one could pass a law providing new homes or schools . . . nor were there any homes here ready for them to occupy.

So, with bare hands and primitive tools, they individually dug from the earth and cut from the forests their own homes and schools. Ceaselessly and endlessly they worked at their simple tasks, struggling for necessities . . . looking ahead, not behind . . . building a heritage for millions of Americans to come.

Are we less courageous than they?

Is war-scarred Europe more

destitute than they were?

Is there less hope in our time than theirs?

Are our shortages more acute than 100%?

There is a simple answer to those questions and to the problem they pose. It is a **WORD**. A short word, without glamour, but a virile word of dynamic force . . . a word, that in its simplicity, might be overlooked, but a word so powerful as to be virtually magic.

It isn't a new word to Ceco thinking, for in January 1947 we said this word was the key to better times—to security for all.

May we say it again?

It is **W-O-R-K**—a four-letter word for continuing prosperity, for preserving freedom in America and for providing hope throughout the world. As we said before, *everyone* must work more . . . produce more—*management* and *labor*.

Suppose we look at the simple mathematics of the problem. There just aren't enough homes, schools, hospitals, roads, to satisfy the needs of all—not enough steel, automobiles, freight cars, food . . . for America and the rest of the world. How can more of these scarce things be made available sooner, and at **LOWER PRICES**?

We, like you, have heard many so-called cure-alls. Some say too many have too much money . . . they bid against each other for scarce things and thus keep prices ever moving upward, so taxes must be raised, not lowered—must be kept high to draw off excess money. Credit must be curtailed so buying will be slowed down. Or prices must be regulated and goods rationed.

Others say don't buy unless your needs are desperate, quit eating certain foods certain days, don't build now . . . don't . . . don't . . . don't . . . verboten. It all has a familiar ring somehow. It's a creed of hopelessness—of negation.

Let's hear a new voice in America, raised high in a mighty crescendo, drowning out those voices of fear. Yes, a new voice of hope, which will say in clear unmistakable tones of triumph . . .

"Let's **DO** something . . . yes, let's trade **DO** for **DON'T**."

We of Ceco believe the American way to solve the problem of shortages and high prices is one of action . . . one of *doing* . . . of *making more things*, not buying less of what we have, of increasing prosperity . . . not dividing misery. And prosperity comes from *making a lot* for all . . . not *dividing a little* with all.

vs. 60,000,000 EMPLOYED..

Look at it this way. There are some 60,000,000 adults—men and women—employed in the nation today, making things for the more than 140,000,000 Americans and the many, many millions in all the other countries of the world. Now we can't increase our 60,000,000 employed to any great degree very fast. They just about represent today's manpower capacity—but, if everyone of those 60,000,000 . . . executives . . . managers . . . labor . . . white collar people, *ALL* of America's working force, produced more *individually*, things would become more plentiful and prices would be reduced.

It's basically that simple.

Yes . . . we 60,000,000 Americans must work more, produce more, instead of less, and that goes for EUROPE and EVERY OTHER PART of the world. Everywhere we must increase man-hour output . . . bricklayers must lay *more* bricks, architects create *more* buildings, miners dig *more* coal, farmers raise *more* produce, stenographers write *more* letters, managers do *more* managing . . . and this must go clear back through the entire economy from raw materials to manufactured products.

Then, and only then, will scarce things be plentiful . . . will money stop bidding up prices . . . will inflation be halted and a sound basis be established for the security of all, both *labor* and *capital*.

Given a freer rein this past year, the building industry made real progress in cutting down building shortages. For example, twice as many homes were completed in 1947, as compared to 1946 . . . plant expansion is getting closer to demand. Ceco salutes construction men for the job they are doing.

We like to feel that in some measure we have been helpful in this progress. Here are some of the things we have done to help the building industry in 1947.

Our production in 1947 nearly absorbed manufacturing capacity, which was doubled in 1946 • New fabricating plants were erected in Hillside, New Jersey and Houston, Texas • Personnel in plants, offices and sales force increased more than 50% • More than 100 improvements were effected in our products • More than one-third of our new products developed since the war were put in production.

But what about the future?

Today, as was true a year ago, the building industry faces an imposing demand for all types of construction. People want more homes, schools, roads, and will get them if an *unhampered* building industry is permitted to provide them . . . could get them at lower prices, too, if *ALL* would *WORK* to produce *MORE*, not less.

We of Ceco believe in America's future, in its ability to meet the challenge of world leadership—for after all, a way of life that has given Americans more of the good things of earth than any other people anywhere doesn't have to be *proven* . . . it is proven . . . *it is working*.

As for the building industry, Ceco has confidence *we can* count on our architects, engineers, contractors, builders and industry labor, to provide the structural needs of our nation. To this end the industry—America—can count on Ceco.

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STEEL**

PARTIAL LIST OF CECO PRODUCTS • METAL WINDOWS AND DOORS • METAL FRAME SCREENS • STEEL JOISTS AND ROOF DECK • METAL LATH AND ACCESSORIES • MEYER STEELFORMS • CONCRETE REINFORCING BARS • WELDED STEEL FABRIC • HIGHWAY PRODUCTS • CORRUGATED ROOFING • LOUVRE VENTILATORS

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It helps you do a better job!

It is one reason why Upson Panels have been so widely used—for re-covering cracked plaster, and for building crackproof walls and ceilings in tens of thousands of homes. With this ingenious device you can apply Upson Panels *without visible face nailing*—and the chore of filling nail holes.

At the first sharp blow of your hammer, Fastener prongs enter back of panel. Second blow turns the prongs, firmly clinching the Fastener. Carrying capacity of Upson Fasteners, applied according to directions, actually is 12½ times the weight of the panels. Ask your lumber dealer for direction sheets or write now to The Upson Company, *Pacemaker in Crackproof Panels for 35 Years.*



... to RE-COVER CRACKED PLASTER=

1



Nail furring on 16" centers, right over old plaster.

2



Nail Upson Fasteners to furring strips, 8" apart.

3



Clinch fasteners. See direction sheet for simple method.

4



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AMERICAN BUILDER

and Building Age

Founded—1879

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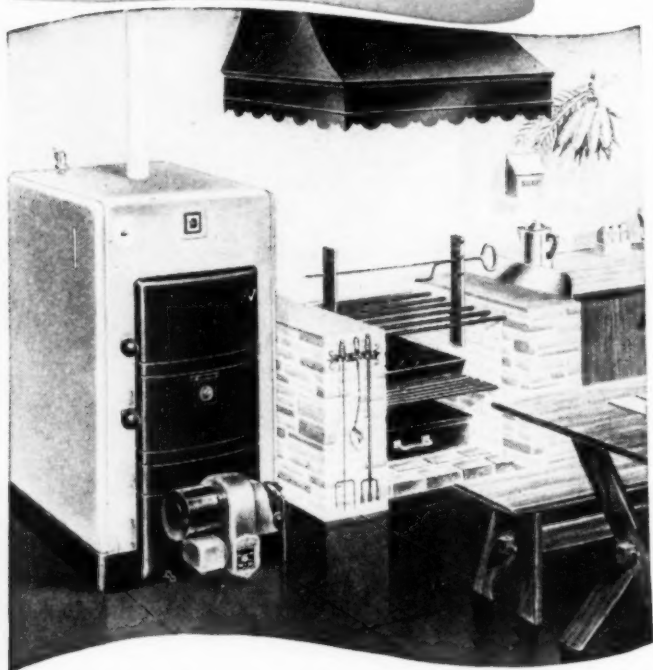
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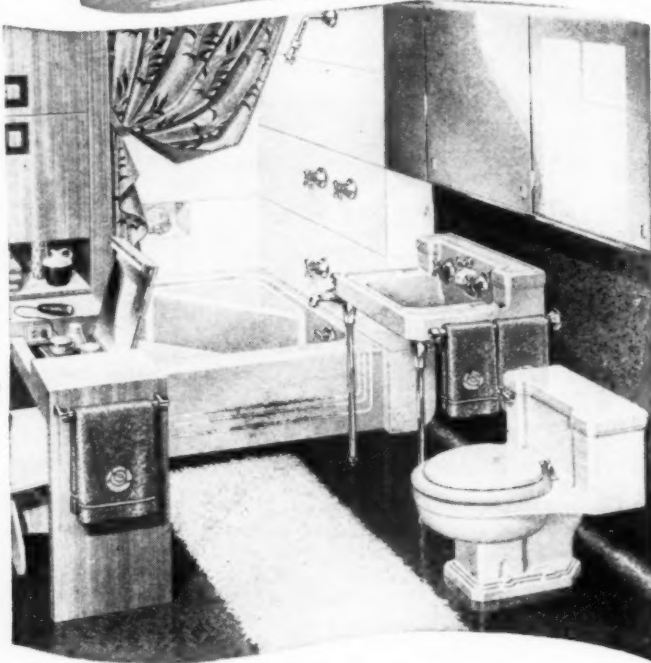
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Here's a basement planned for year 'round picnics. And the smartly styled SEVERN Arcoflame Oil Heating Unit makes home heating practically a picnic, too. This efficient, automatic boiler-burner unit is designed for small to medium sized homes, and includes a host of engineering features for greater comfort and convenience.



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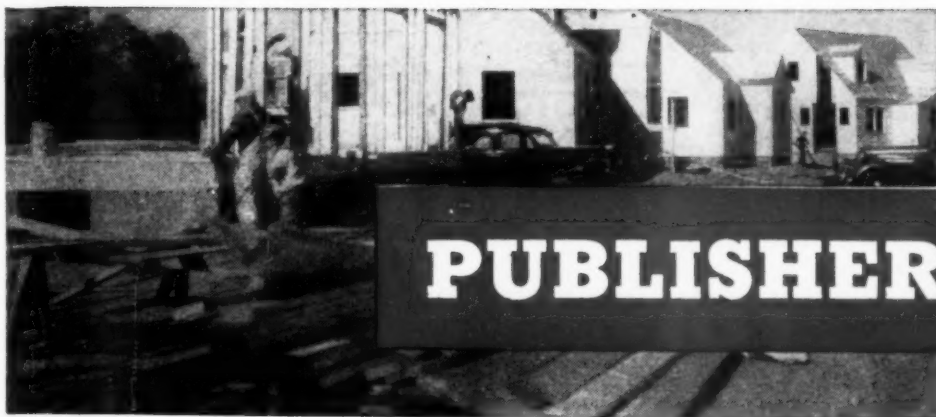
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PUBLISHER'S PAGE

Work Versus Inflation

AS the new year begins, the American people are confronted with some of the most important, difficult and baffling problems in their history. It is highly significant that these problems differ widely from those that the government planners predicted during the war, and made useless plans to meet. They anticipated that cessation of the huge government buying for war would be followed by depression and deflation, causing millions to be unemployed, unless huge government expenditures were made on "public works", with which they wanted to include housing, and unless hours of work were drastically reduced.

Instead of *deflation*, the principal thing the same planners are now inventing policies to stop is *inflation*. The present *inflation* is partly due to policies the planners adopted to prevent *deflation* and partly to economic developments that others foresaw, but that the planners wholly failed to foresee. It is hard to have confidence in policies favored by men who so recently were so completely wrong about economic conditions in the country, the problems these conditions would cause, and the policies that would be needed to solve these problems.

The nation emerged from the war with a great accumulation of shortages of civilian goods on the one hand, and great accumulations of individual and business purchasing power on the other hand. It should have been plain that the use of this purchasing power, in attempts to buy goods in such short supply, would cause rapid increases in prices, unless there was also a rapid and great increase in production.

The needed increase in production would have required full use of the nation's plant and man power. This has been prevented by a government postwar policy of restricting hours

of work—a policy originally intended to prevent unemployment. Yet it is continued when there is and has been not only full employment but a general shortage of labor. The need for increased production in this country to remedy shortages and combat inflation will be intensified, if we adopt the Marshall plan of relief for Europe and other parts of the world. But nobody, excepting a few business leaders, has had the courage to advocate the increase in hours of work that two years of postwar experience has proved is essential to the needed increase of production.

The government planners are replete with proposals for restoring war-time controls of prices, and even wages, and of what shall be done with what is produced, including its "conservation" by reduced consumption of it. But they have nothing to say about the fact that production needed to supply domestic and foreign needs, and to combat inflation, is being restricted by the "planned" postwar policy of decreased hours of work. Evidently, leaders of both parties consider that advocacy of more hours of work, even for more hours of pay, would be bad politics, as they are equally silent about it.

The problem of inflation will not be solved by men who show they are more concerned about politics than about inflation. Increased work, resulting in increased production, has the great merit that it would serve the double purpose of: (1) providing more goods for both domestic consumption and foreign relief, and (2) help combat inflation—the two most important objectives that we need to accomplish in 1948.

Samuel O. Drumm,

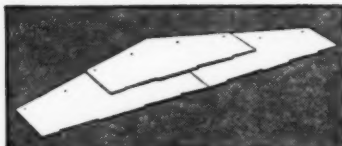
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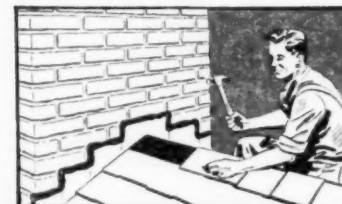
2. Self-Spacing Feature Saves Time—Shingles are lined up over the points on the preceding course.



3. Automatic Alignment—No chalk lines necessary, no delays measuring courses. Any roofer could actually lay American Colonial Shingles blindfolded.



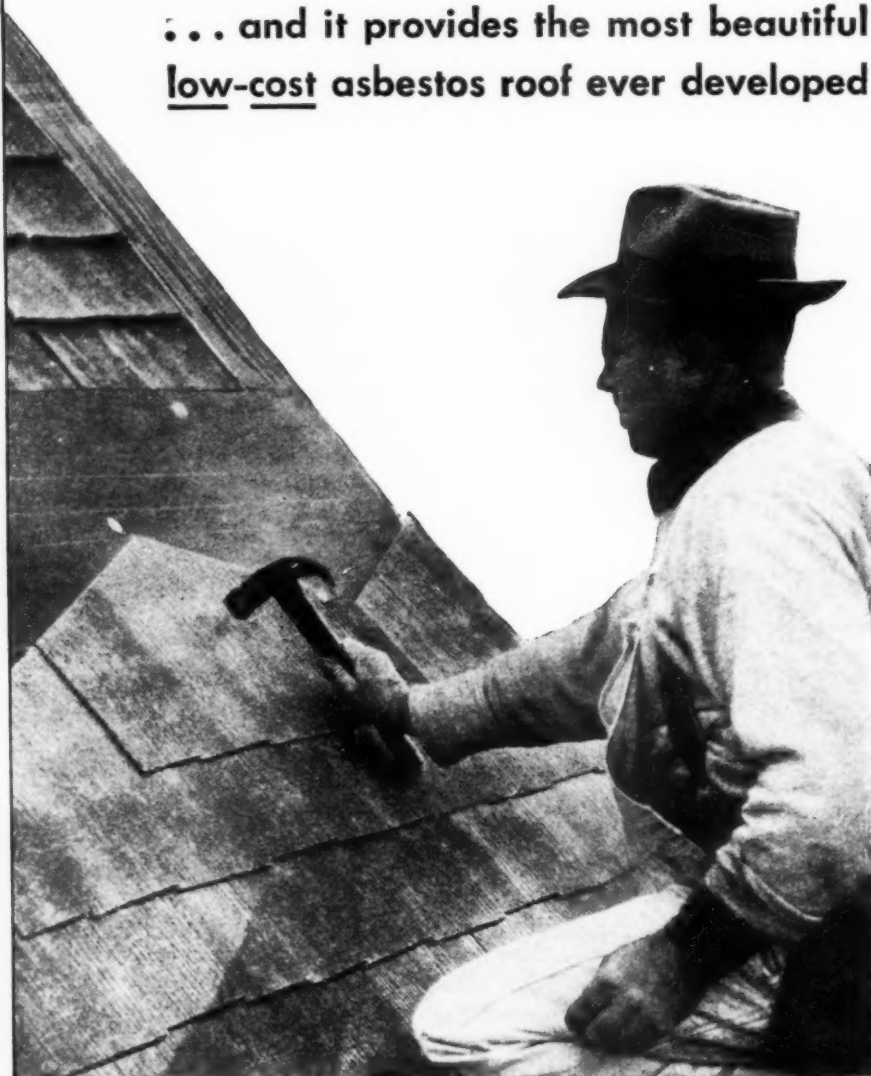
4. Easy to Handle—Bundles weigh about the same as asphalt strips. Use only 80 pieces per square. Only 4 nails per shingle, in pre-punched holes.



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6. Cutter Speeds Application—When shingles must be cut to fit around valleys, dormers, along the rake, etc., a shingle cutter does the job easily, quickly—right on the roof.



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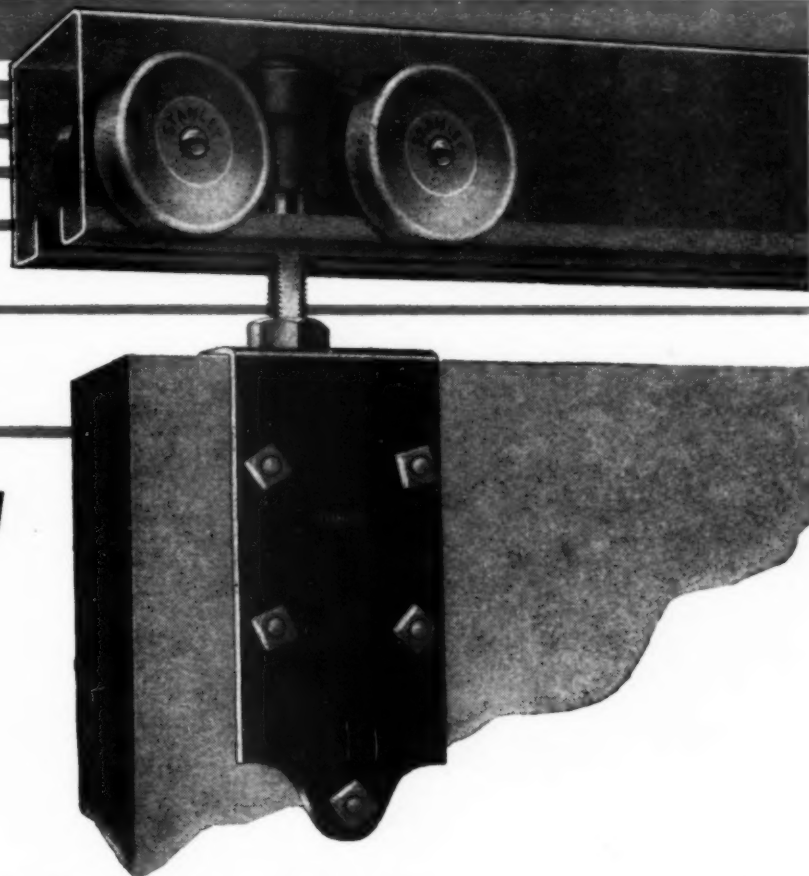


Johns-Manville

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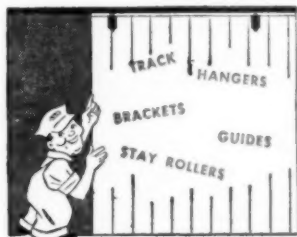


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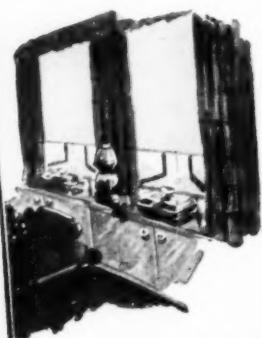


Color

IS THE NEWS IN SHADES

Some like it mixed . . . some like it matched

Now, color-scheming begins with your shades! Follow the rainbow . . . match, mix, harmonize, accent. See what a choice; high fashion contrasts, perfect matches, soft-subtle neutrals. And let the breezes blow, the rains come . . . these fine quality shades gather less dust, refuse to crack, wipe off easily with a damp cloth.



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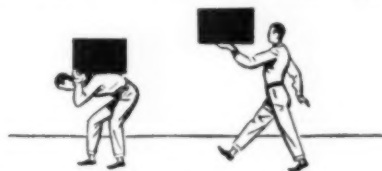
FORD BONUS BUILT TRUCK



Not ONE Capacity . . . but real RANGE when needed!

call of duty. Ford Trucks are not limited to doing one single, specific job!

Second, these same **WORK RESERVES** allow Ford Trucks to relax on the job . . . to do their jobs with less strain and less wear. Thus, Ford Trucks last *longer* because they work *easier*!



The load is carried EASIER by the stronger man!

Remember, every Ford Truck for '48 is Bonus Built for longer life, wider use. Keep in touch with your Ford Dealer . . . plan to see these new Ford Bonus Built Trucks for '48 as soon as announced. Don't settle for less—get the only truck that's Bonus Built! It's Ford!

***BONUS:** "Something given in addition to what is usual or strictly due."—Webster's Dictionary.

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Carryable
GENERATORS

ON big jobs, on small jobs, and on *all* jobs, you'll save time and money by operating your power tools with a Homelite Carryable Gasoline-Engine-Driven Generator. You'll make greater savings in many ways.

To begin with, when you have one of these compact, handy generators, there's no need for wasting time or spending money on power in-

stallations. Nor are you bothered with long cables which are often damaged by trucks and bulldozers *and always constituting a tripping hazard*. And more important, by operating your tools direct, by *short* cable, from a Homelite, you eliminate voltage drops which cause overloading of motors and dulling of cutting edges. Powerful enough to operate several tools at a time, these Homelite Generators are light enough to be easily and quickly moved from job to job thereby providing ready power at all times for all needs. Write for free demonstration today.

Homelite Corporation
Carryable PUMPS • GENERATORS • BLOWERS
501 RIVERDALE AVENUE, PORT CHESTER, NEW YORK

TELL TWO STORIES

with one siding



It's not news when there are two sides to one story. But it's good news to homeowners when they learn about *one* siding with *two* stories.

Tell them these stories. Feature Flintkote Insulated Sidings, and watch homeowners beam with delight when they hear about the two-for-one value in this modern remodeling material.

Point out that Flintkote Insulated Sidings enable them to do the *two* important jobs of re-siding and insulating . . . in *one* quick, convenient operation.

They'll soon recognize the value of getting the healthful, year-round living comfort that insulation brings . . .

at the same time they're bringing new beauty to old homes by re-siding with an attractive, durable product.

Watch their faces when you tell them about the low monthly payment plan. As for maintenance expense you won't get much argument over the obvious savings in periodic re-painting costs.

So push these profitable sidings. They're available *now* in a variety of beautiful colors and patterns in pleasing brick and stone designs. Display them. Tell your customers the *two* stories of this *one* efficient, economical siding . . . and watch sales resistance take a dive.

FLINTKOTE
the extra years of service cost no more!



THE FLINTKOTE COMPANY

Building Materials Division

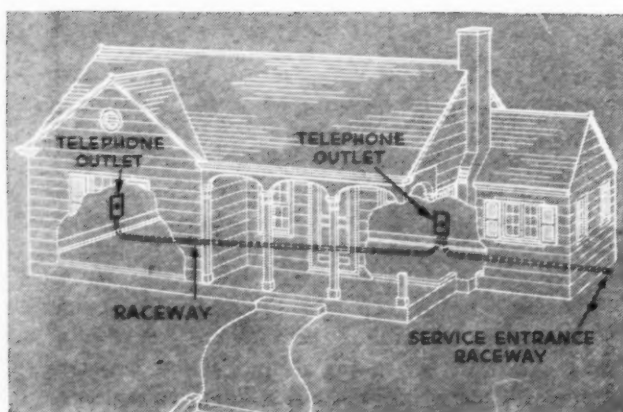
30 Rockefeller Plaza, New York 20, N. Y.

Offices in Principal Cities



Designed by Harold Spitznagel

PUT TELEPHONE RACEWAYS IN YOUR SMALL HOME PLANS



Buyers of small homes as well as larger ones are quick to notice and appreciate any features which add charm and convenience. Telephone raceways are important because they provide a channel *within* walls for telephone wires, avoiding the need to run exposed wires on attractive walls and woodwork.

It is easy and costs little extra to install a raceway during construction. A few sections of pipe or electrical conduit will provide an entrance for telephone wires and passage within walls to convenient telephone outlet locations.

Your Bell Telephone Company will be glad to co-operate with you in planning telephone raceway systems. Just call your Telephone Business Office and ask for "Architects and Builders Service."

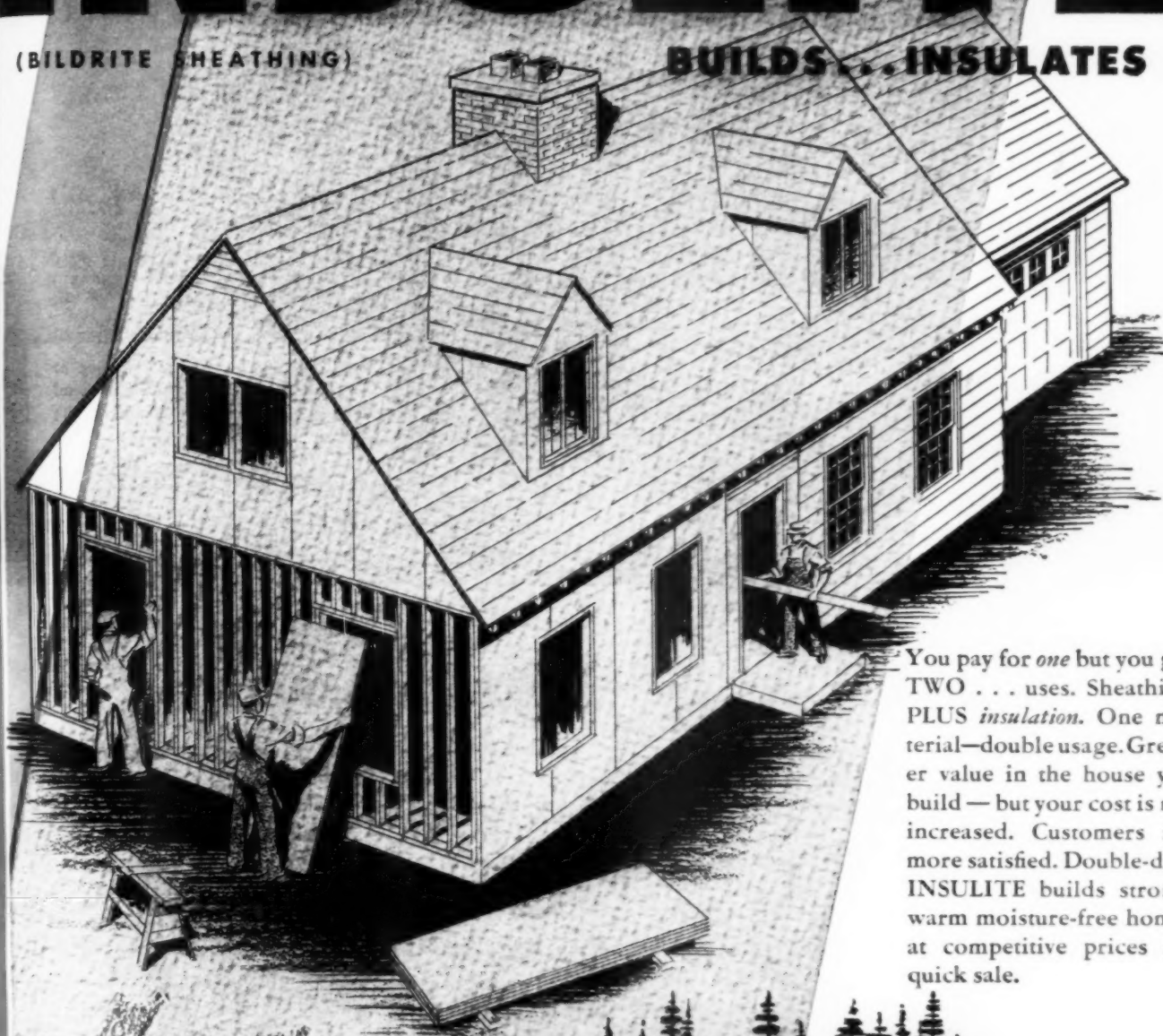
BELL TELEPHONE SYSTEM



DOUBLE DUTY INSULITE

(BILDRITE SHEATHING)

BUILDS... INSULATES



You pay for *one* but you get **TWO . . .** uses. Sheathing **PLUS** insulation. One material—double usage. Greater value in the house you build — but your cost is not increased. Customers are more satisfied. Double-duty **INSULITE** builds strong, warm moisture-free homes at competitive prices for quick sale.

**INSULATES AS IT . . .
BUILDS AS IT**

double-duty
INSULITE

The **GENUINE**

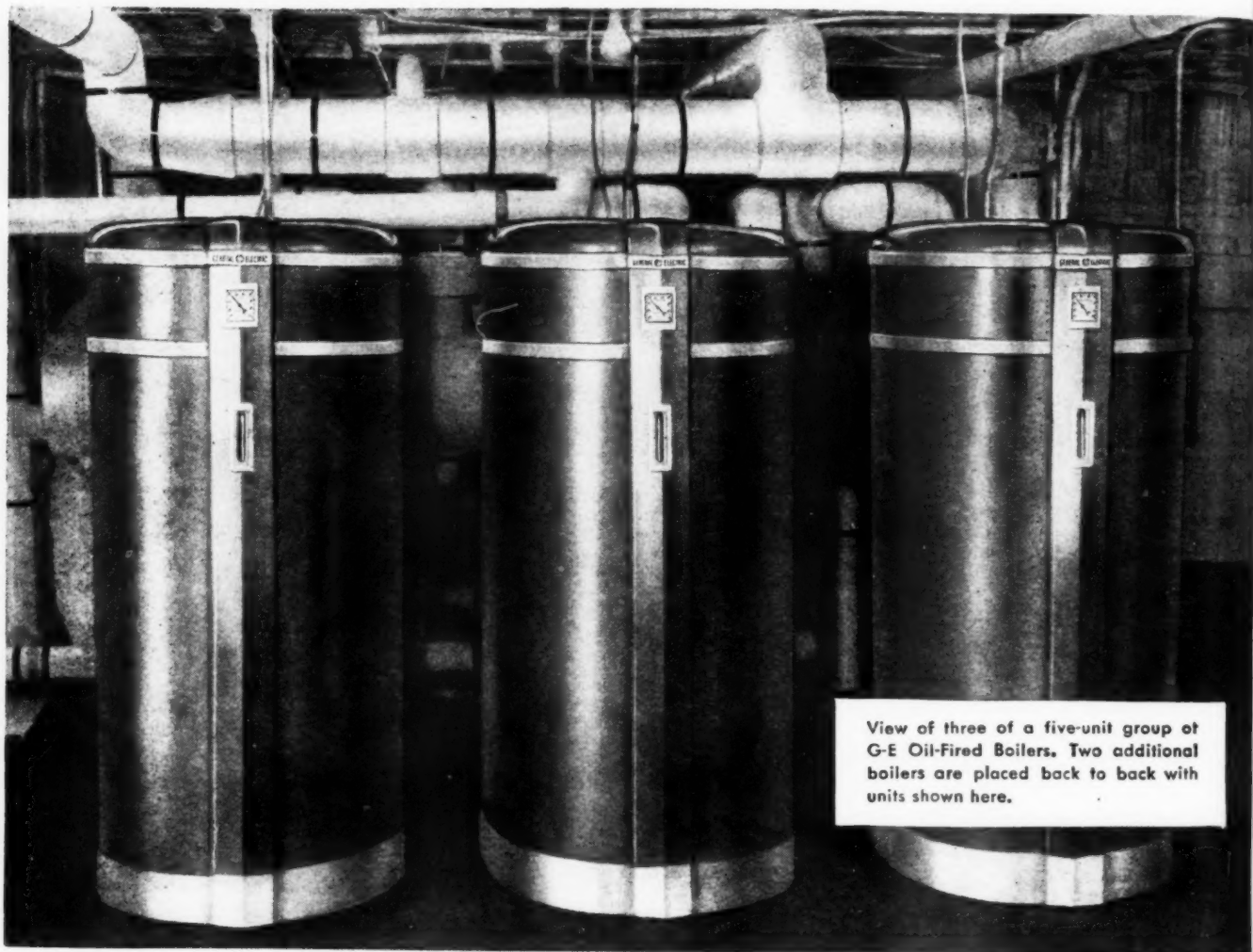
**BUILDS
INSULATES**

"Insulite" is a registered
trade mark, U.S. Pat. Off.

INSULITE DIVISION
PAPER
MINNEAPOLIS 2, MINNESOTA

MINNESOTA & ONTARIO
COMPANY

DETROIT PUBLIC LIBRARY



Multiple Installations of Oil-Fired Boilers...

cut FUEL CONSUMPTION

You actually multiply fuel savings when you use several General Electric Oil-fired Boilers linked in series instead of a single large unit. Boilers are automatically cut out when higher temperatures decrease the heating load.

cut OPERATING COSTS

General Electric Oil-fired Boilers are fully automatic...operating without the continuous engineering supervision required for large industrial or commercial units. The G-E controls and safety features eliminate the need for an operating engineer.*

cut SHUT DOWN RISK

Service may be performed on one or more units leaving full output of remaining units available for heating. Call your General Electric dealer for full information. *General Electric Co., Air Conditioning Dept., Section 8151, Bloomfield, New Jersey.*

*Unless so required by local or state law.

GENERAL  ELECTRIC
Automatic Gas and Oil Heat



GOOD EQUIPMENT... GOOD POLICY

Norge has found that it is a good policy to produce only the best—a policy that has won staunch friends for Norge products among architects, builders and owners. Norge Division, Borg-Warner Corp., Detroit 26, Mich.

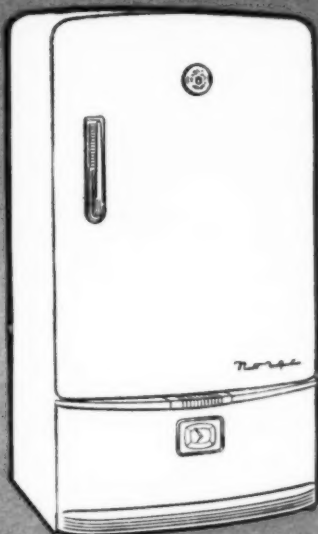


GAS RANGES



ELECTRIC
WATER HEATERS

REFRIGERATORS



ELECTRIC RANGES



Norge products, distributed worldwide, are typical examples of the values made possible by the American system of free enterprise.

SEE
NORGE
BEFORE YOU BUY



Refrigerators



Electric Ranges



Washers



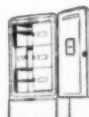
Electric
Water Heaters



Home Heaters



Gas Ranges



Home &
Farm Freezers

Roddiscraft

HARDWOOD PLYWOOD



Saves Time . . . Reduces Labor Costs

ANYTHING that will reduce labor costs on the job makes a worthwhile saving. Your plywood customers are looking for any possible means of reducing costs — whether they are contractors, builders, furniture manufacturers, cabinet makers, or fixture houses.

Roddiscraft plywood saves labor costs because it is

a quality product — sanded to satin smoothness, cut absolutely true, with edges clean as a whistle — all ready for application.

Show Roddiscraft quality point by point — show how it requires less finishing, fitting and trimming. Your customers can see the difference.

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge 39, Mass. . . 229 Vassar St.
Chicago 8, Ill. . . 1440 W. Cermak Rd.
Cincinnati 2, Ohio . . 457 E. Sixth St.
Dallas 10, Texas . . . 2800 Medill St.
Detroit, Mich. . . 11855 E. Jefferson Ave.
Kansas City 8, Mo. . . 2729 Southwest Blvd.
Louisville 10, Ky. . . 1201-S S. 15th St.

Long Island City, N. Y.
Los Angeles 11, Calif. . . 2860 E. 54th St.
Marshfield, Wis. . . 115 S. Palmetto St.
Milwaukee 8, Wis. . . 4601 W. State St.
New York City, N. Y. . . 920 E. 149th St.
San Antonio, Texas . . 727 N. Cherry St.

DEALERS IN ALL PRINCIPAL CITIES

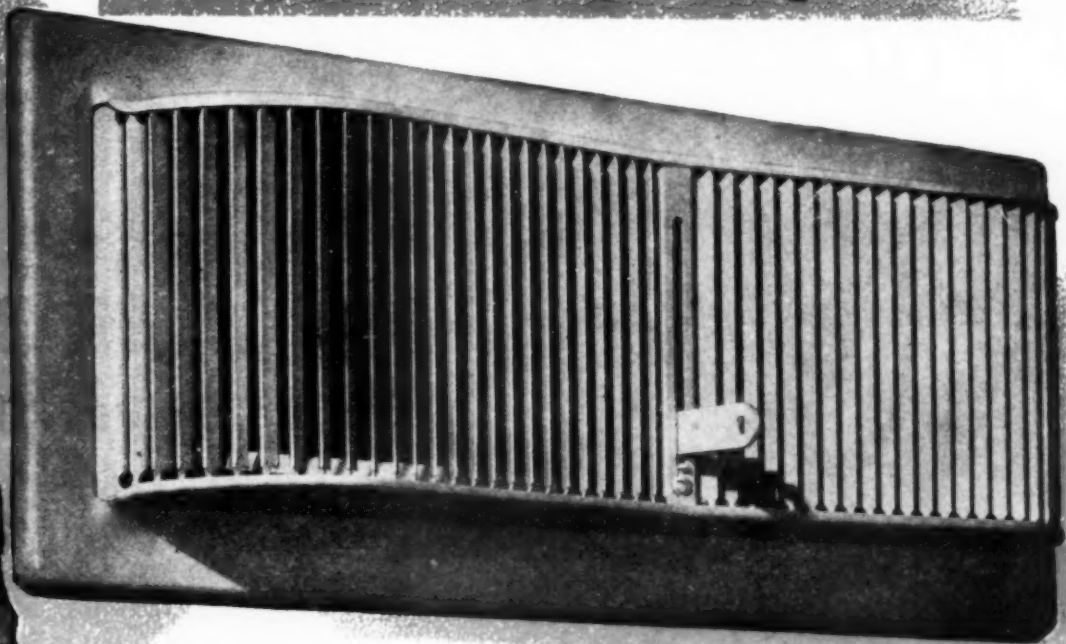
Roddiscraft

Roddis Lumber & Veneer Co.

MARSHFIELD, WISCONSIN



Classic Beauty!



THE NEW HONEYWELL REGISTER!

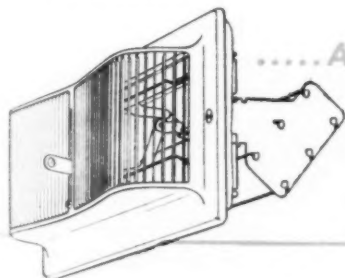
DESIGN FEATURES

1. Balancing becomes a QUICK, ONE-MAN job.
2. Branch quadrants can be eliminated, when velocities are under 800 fpm.
3. Installation costs are drastically cut.
4. Smart new appearance and functional design.
5. No streaks on walls and ceilings.
6. Manual shut-off for fuel saving and convenience.

BEAUTY in appearance plus "beauty" in performance! . . . This combination is exactly why the new Honeywell Register is such a spectacular improvement over conventional forced air registers.

The handsome, modern lines of Honeywell's Register are designed not alone for appearance. On the performance side, the graceful contour of the extended grille is the real reason for the unbelievably smooth, even air diffusion into every nook and cranny of the room. On either high or low wall installations, temperatures are the same across the room as they are near the register. The air is diffused in every direction instead of being concentrated in a narrow stream. And in addition, the Honeywell Register is functionally designed to eliminate unsightly wall streaks.

Make certain you include Honeywell's new Register wherever warm air heat is installed. It's another way to mark your homes as equipped with the newest in modern improvements. Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Toronto 12, Ontario.



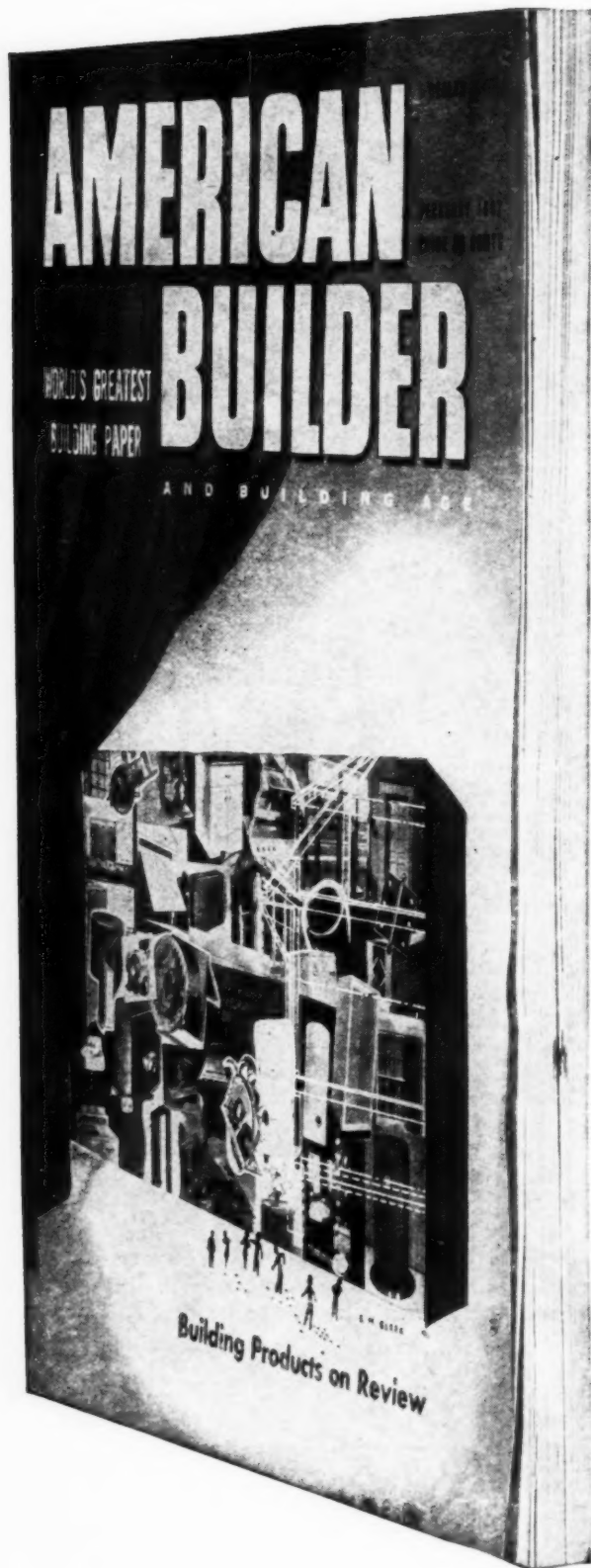
.....Available NOW.....

Self-contained volume dampers accurately meter the air with an adjustable lever at the register itself. Locking feature guards against unbalancing system.

MINNEAPOLIS
Honeywell
CONTROL SYSTEMS

PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW

Volume Buying Attention



February

AMERICAN BUILDER NAHB CONVENTION ISSUE

Building Products on Review

Focus the spotlight of American Builder's buying influence on your products in the **February 1948 issue**. This is the annual "Building Products on Review" issue providing specific data on products, which is always of compelling reader interest.

The entire content of American Builder receives high reader attention, but the "Building Products on Review" section of last year's February issue ranked highest of all. Readers like to read about new and improved products.

American Builder has more than 80,000 net paid circulation throughout the building field—that's **truly volume buying attention**.

PLAN NOW TO ADVERTISE IN THE NAHB CONVENTION ISSUE OF AMERICAN BUILDER! This issue will be mailed well ahead of the show. Your message will be focused on important buyers and prospects at just the right time.

MAKE YOUR SPACE RESERVATIONS EARLY.

AMERICAN BUILDER

A Simmons-Boardman Publication

105 West Adams Street—Chicago 3, Illinois
30 Church Street—New York 7, New York

PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW



Uncle Stokemore will be there...

Will You . . . Hmm? You enter the massive portals on Lexington Avenue. You hand your ticket to the guardian of the gate. He bows, touches the visor of his gold encrusted cap, and waves you on up the regal marble staircase. And then, just at your right as you enter, you see THE exhibit of the 1948 Heating and Ventilating Exposition—the display of RICHMOND!

New? Mister, it's Top-Secret! Frankly, we can't tell you now about the NEW Richmond heating equipment you'll find there. Until the doors open on the show, the secret specifications will be locked in our safe. We can tell you this, however: everything you see at the Richmond Dis-

play you can recommend to your most exacting clients. It will be well worth your while to see this exhibit in person. If the pressure of business makes it impossible to attend, you can get a copy of our special announcement bulletin, ready next month.

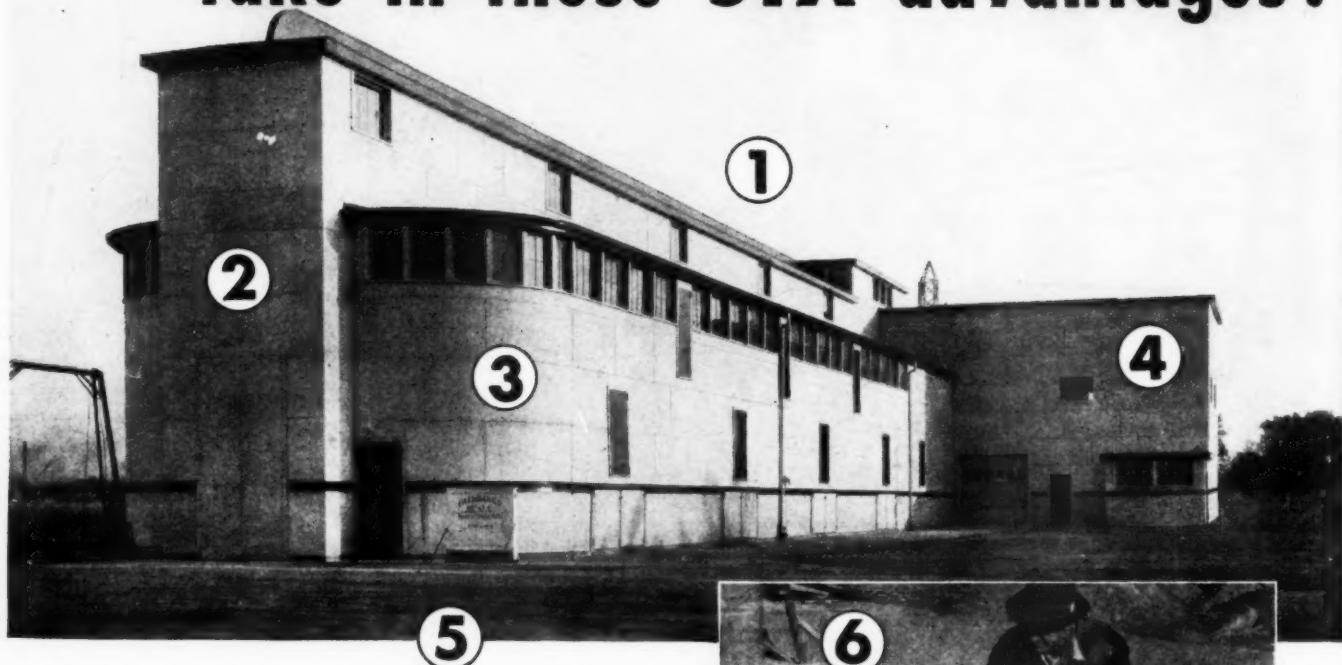
Guaranteed—As always, all gas-fired Richmond heating equipment has both a one-year replacement guarantee and also A. G. A. approval. All Richmond plumbing fixtures have a full year's replacement guarantee, too, as recommended by the U. S. Bureau of Standards. For complete details on any Richmond plumbing or heating product, address Richmond Radiator Company, Dept. 1-A.B., 19 East 47th Street, New York 17, N. Y.



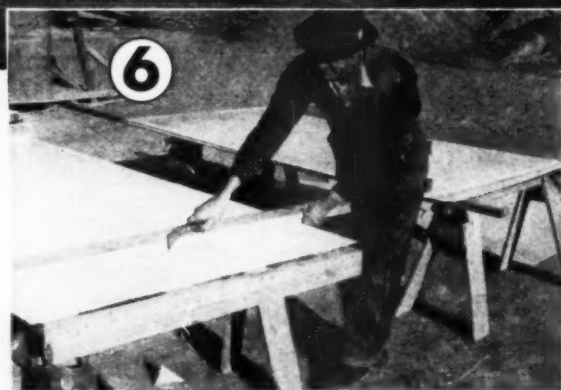
RICHMOND RADIATOR COMPANY
AFFILIATE OF REYNOLDS METALS COMPANY

Enameled Cast Iron Ware • Vitreous China • Perma-Gloss • Gas Boilers • Gas Winter Air Conditioning • Gas Gravity Furnaces • Radiators

At **ONE** glance — take in these **SIX** advantages!



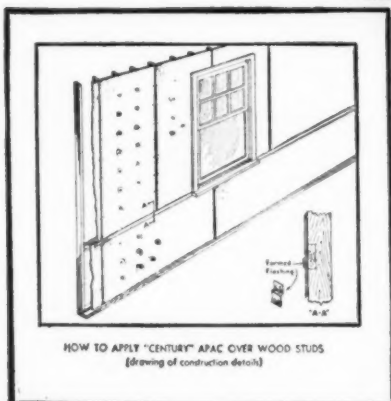
- 1 ATTRACTIVE APPEARANCE** . . . neat, workmanlike finish in pleasing gray color.
- 2 ROCK-LIKE PERMANENCE** . . . can't burn, can't rot, can't rust, grows tougher with age.
- 3 FLEXIBILITY** . . . conforms to considerable degree of curvature.
- 4 FAST COVERAGE** . . . 4' x 8' sheets go up 32 sq. ft. at a time; fasten with nails or screws; save man-hours.
- 5 VERSATILITY** . . . laid horizontally or vertically, Apac sheets are adaptable to any flat surface requirement.



- 6 SPEEDIER CUTTING** . . . just score Apac as shown above, then snap off over straight edge. Quicker and just as accurate as hand-sawing.

APAC

asbestos-cement sheets

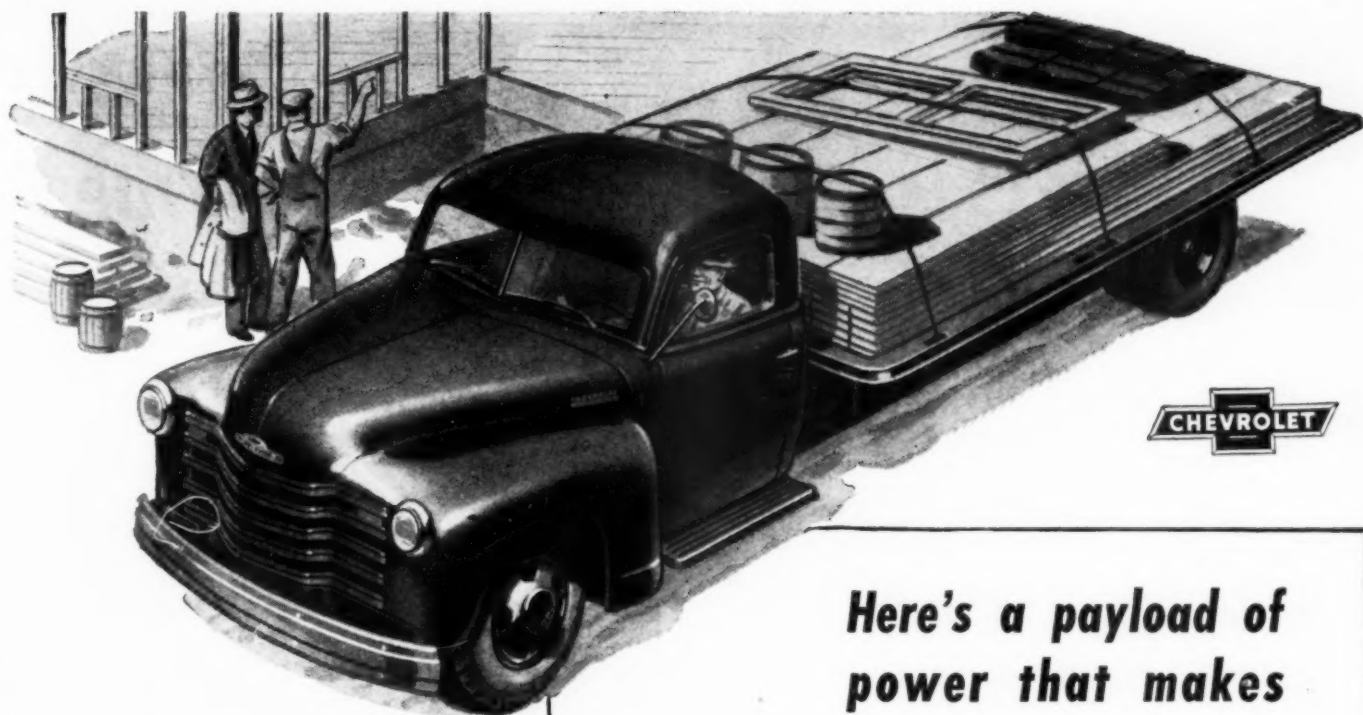


Consider those six advantages of K&M "Century" Apac . . . couple them up with low cost and freedom from maintenance . . . and you have a rugged sheet material that will save you time and money on almost any job you undertake. You can apply Apac directly over wood studding on centers up to 24" (see details at left), or over insulation board, solid wood sheathing or steel girts. It's easy to handle, and comes in 4' x 8' sheets, $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ " thick. See your dealer about it, or write direct to us for further particulars.

Original manufacturers of asbestos-cement roofing shingles in this country.

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA





*Here's a payload of
power that makes*

ADVANCE-DESIGN CHEVROLET TRUCKS

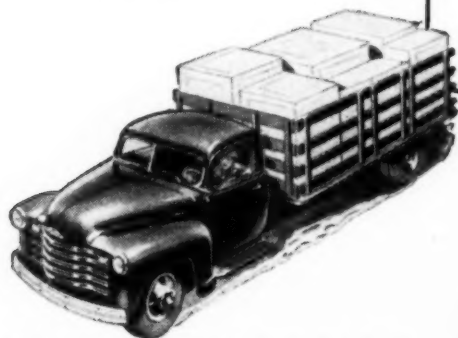
a prime value!



Now—new comfort! The cab that "breathes" draws in fresh air and forces out used air.* It's Flexi-Mounted, cushioned on rubber—with 12 inches more foot room—eight inches more seating space and fully adjustable seat!



Here are stronger new frames, longer wheelbases and brakes that are specially designed for greater brake-lining contact.



From roof to road—from headlights to tail light, they're new with Advance-Design—107 models and eight wheelbases!

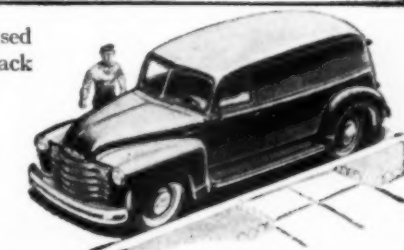
**Fresh-air heating and ventilating system optional at extra cost.*

On the grades or level ground, Advance-Design Chevrolet trucks pave-the-way with power-packed performance of Chevrolet's Valve-in-Head Engine, the world's most economical for its size! Here, too, is a combination of fine, new features found only in these trucks of surpassing value!

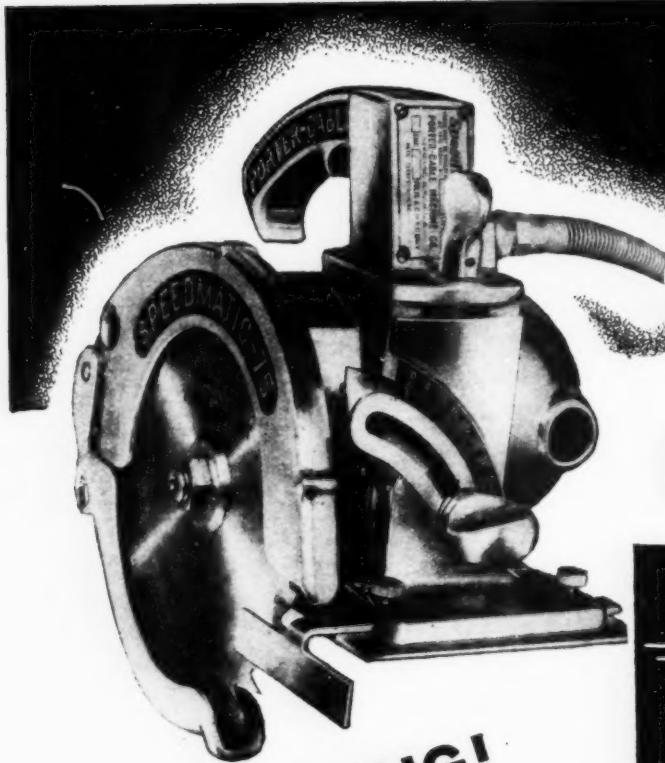
**CHOOSE CHEVROLET TRUCKS FOR
TRANSPORTATION UNLIMITED!**

CHEVROLET MOTOR DIVISION, General Motors Corporation,
DETROIT 2, MICHIGAN

Pick-ups and panels have increased load space—stake and high-rack bodies more efficient loading.



Larger windshield and side windows give 22% greater visibility. New rear-corner windows—optional at extra cost—provide even more!



*Easier to
Handle*

Porter-Cable

***Speedmatic*
SAW**

***NO VEERING!
NO TWISTING!
NO TIPPING!***

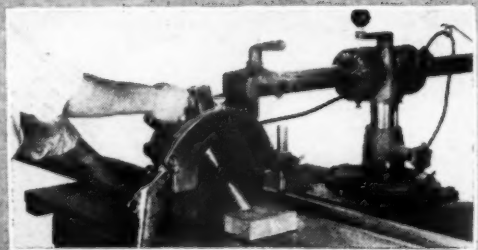
● In a power saw, speed alone is not enough. The question is—does it handle easily? Does it keep straight to line without veering and tipping? Does it cut at any angle and still keep its balance? Does it produce better work?

Once you hold a Speedmatic in your hand, you'll answer every question with a big YES.

Speedmatic cuts straight and fast
with less fatigue.

1. It's **SCIENTIFICALLY BALANCED** for one hand operation.
2. The broad shoe is **CORRECTLY PLACED** for steady rest. Prevents veering, cramping, twisting and swerving.
3. The blade is **UNUSUALLY FAST**—whirls around at 7000 rpm! Practically feeds itself without "pushing."
4. It's **ADAPTABLE** to any angle or depth cutting. Rips, cross-cuts, bevels. Saws mitres . . . does dado cutting. Does not require pre-marking for a square cut.

EXTRA UTILITY FEATURE



Without tools you can attach the Speedmatic to the Porter-Cable Radial Swing Arm . . . Doubles utility of the saw as a slide or rip saw for handling a number of duplicate pieces.

PORTER-CABLE
MACHINE COMPANY

1721-1 N. SALINA ST.

SYRACUSE, N. Y.

SEE! THE SPEEDMATIC

today at hardware stores, mill supply houses,
building material dealers!



"SO YOU'VE SOLVED
ALL YOUR
CASEMENT
WINDOW
PROBLEMS, EH?"

"YOU BET!... WITH THE
LIGHTER, STRONGER,
BETTER STEELCRAFT
CASEMENT... AVAILABLE
IMMEDIATELY, TOO!"

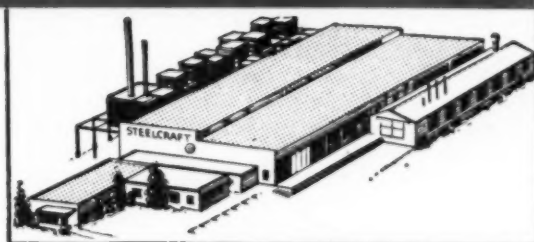


Your Window Problems Disappear With IMMEDIATE DELIVERY ON NEW STEELCRAFT STEEL CASEMENTS!

**EASY TO INSTALL, EASY TO OPERATE,
EASY TO CLEAN! STEELCRAFT
CASEMENTS GIVE COMPLETE
CUSTOMER SATISFACTION!**

Yes...you'll see your casement delivery and installation problems vanish as customer satisfaction mounts with the new STEELCRAFT Casement Windows! Available RIGHT NOW ... made in our new, modern manufacturing plant by production methods that bring streamlined automotive assembly-line procedure into casement construction ... lighter, stronger (*by actual laboratory tests**), better steel casement windows! STEELCRAFT casements are precision-machined for faultless fit, aluminum electropainted by a patented process that makes casements easy to finish, reaches every exposed surface, lasts longer, has real eye appeal! STEELCRAFT casements provide you with exceptional advantages of engineered construction and durability ... plus prompt delivery ... resulting in complete satisfaction for the home owner!

**Available on request*



OUR COMPLETELY NEW, MODERN
MANUFACTURING PLANT GIVES YOU FAST
ASSEMBLY-LINE PRODUCTION, CUTS DELAY!

You Get these Big Steel Casement Benefits!

- 1 Lighter, Yet Stronger Casements
... by Actual Laboratory Tests*
- 2 Electropainting ... for More Protection, Longer Lasting Finish!
- 3 Machined Parts for Perfect Fit, Easier Installation!
- 4 Greater Ventilation ... Easy to Operate, Easy to Clean!

Send for Complete Descriptive Literature.



LIGHTER, YET STRONGER

... pound for pound! Sensationally new manufacturing methods give STEELCRAFT Casements more strength at less weight, more pound-for-pound construction advantages than any other casements!

STEELCRAFT

MANUFACTURING COMPANY
ROSSMOYNE (CINCINNATI), OHIO

MAIL THIS COUPON TODAY!



STEELCRAFT MFG. CO.
9028 Blue Ash Rd.
Rossmoyn (Cincinnati), Ohio

Please send me, without obligation, complete descriptive literature on STEELCRAFT Casement Windows.

Name.....

Position.....

Business Address.....

City.....State.....

PRESENTING THE NEW, MODERNIZED

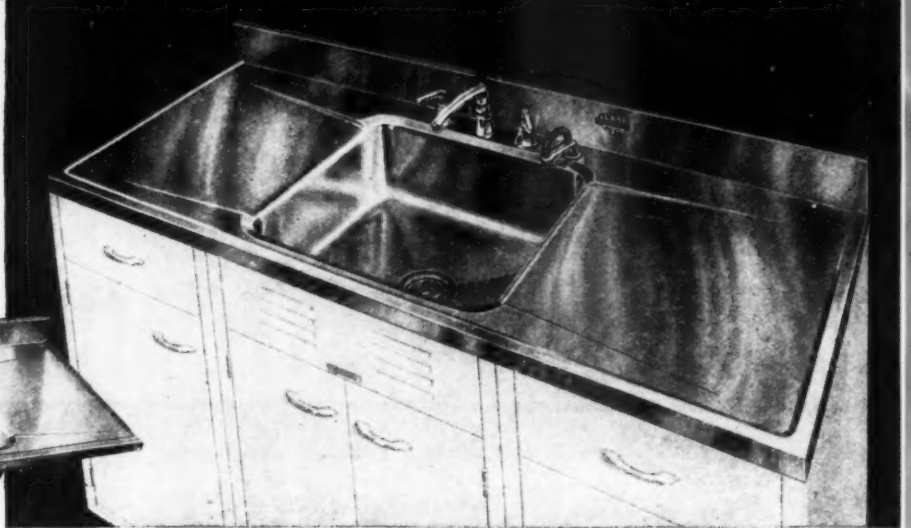


ELKAY *Lustertone*

STAINLESS STEEL CABINET SINKS

Whether your contract calls for a new construction job or a modernization project, there's an

ELKAY
Lustertone
CABINET SINK
that will meet every individual requirement.



9 Points of Superiority

- 1 ELKAY "Lustertone" Cabinet Sinks are built of 18 U. S. standard gauge (extra heavy) genuine solid 18-8 stainless steel.
- 2 The stainless steel tops are bonded to and reinforced with heavy gauge formed metal.
- 3 Drainboards, sink bowls, rims, and splashers are welded integral into one sheet of metal.
- 4 All corners in sink bowls—horizontal, lateral and vertical—are rounded to $1\frac{3}{4}$ inch radius.
- 5 Intersections where sink bowls meet drainboards are welded and rounded to a large radius.
- 6 Intersections where drainboards meet back and return end splashers and where back splashers meet return end splashers have rounded corners.
- 7 Drainboards have a definite, liberal fan shaped pitched area insuring positive drainage.
- 8 Front and back surfaces adjacent to the sink bowls are pitch-beveled to provide additional drainage.
- 9 Entire underside of sink top and bowls is sound deadened.



ELKAY
"Sturdibilt"
STAINLESS
STEEL
SINK BOWLS

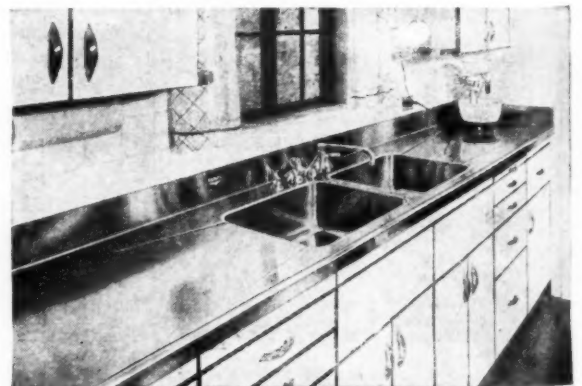
These bowls can be supplied in any size to meet individual requirements. Built of 18 gauge stainless steel. All corners are coved to $1\frac{3}{4}$ inch radius. They are made with 1" flat rim or with shelf for deck type faucets. These bowls are especially designed to be used with linoleum or other composition tops.

5 Standard Sizes

ELKAY "Lustertone" Stainless Steel Cabinet Sinks are offered in five standard sizes. The 54 inch and 60 inch sinks are furnished with 18" x 20" single bowls; the 72 inch sinks are furnished with either 18" x 25" single bowls or 18" x 34" double bowls; the 84 inch sinks are furnished with 18" x 34" double bowls. All bowls are $7\frac{1}{2}$ inches deep. ELKAY "Lustertone" Sinks are equipped with stainless steel basket type strainers. They can be supplied with the latest design "Deck type" chrome finished faucets and spray. All standard sinks have 4 inch back splashers.

CUSTOM-BUILT SINKS

In addition to these five standard sizes, ELKAY Stainless Steel Cabinet Sinks can be supplied in any size and shape to meet individual requirements. Send us your specifications.



A new beautifully illustrated Folder giving complete information about the ELKAY "Lustertone" Cabinet Sinks is now ready for you. Send for folder A.B.-148.

ELKAY PRODUCTS ARE AVAILABLE THROUGH PLUMBING CONTRACTORS

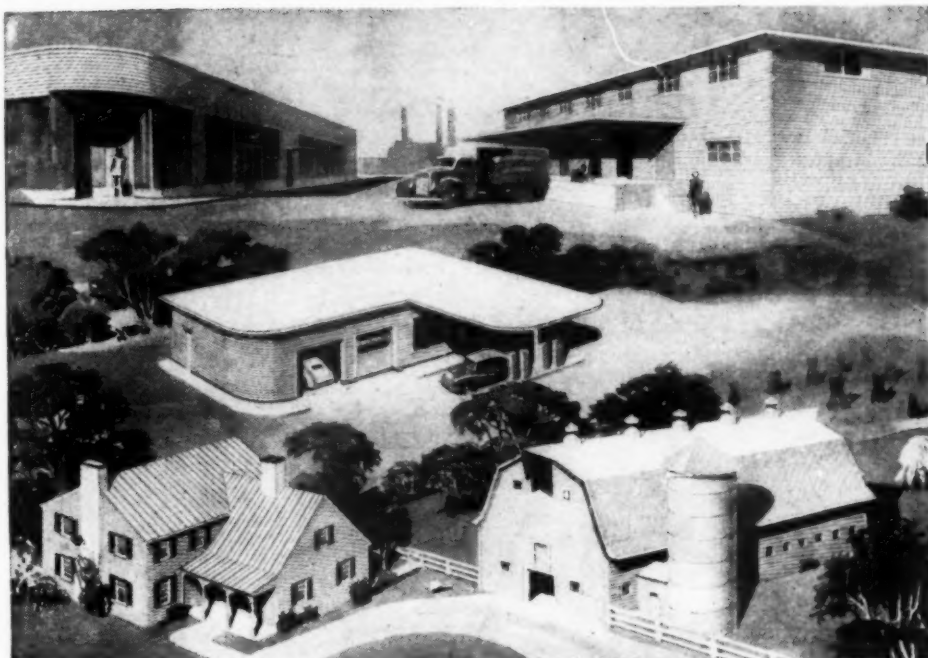
ELKAY MFG. CO., 1874 South 54th Avenue, Chicago 50, Illinois

REYNOLDS *Lifetime* ALUMINUM BUILDING PRODUCTS

for Home, Farm,
Commerce and
Industry . . .

DEMAND is solid and growing, in a multiple market... farm, commercial, industrial and residential. The building industry and the public know the advantages of rust-proof, fire-proof, rot-proof aluminum. They have tested and proved its exceptional insulation value...how its 95% radiant heat reflectivity takes off the summer sun load, cuts winter fuel bills. And with growing sales, the easier handling of lightweight aluminum increases profits. Look into the complete line! See Sweets or write for literature.

Reynolds Metals Company,
Building Products Div., Louisville 1, Ky.



● ROOFING

SHINGLES, "SNAP-SEAL," STANDING SEAM, CORRUGATED, 5-V CRIMP, BUILT-UP ROOFING, FLAT SEAM IN ROLLS

● SIDING

CLAPBOARD, CORRUGATED, 5-V CRIMP, WEATHERBOARD

● ACCESSORIES

RIDGE ROLL, RIDGE CAP, FORMED VALLEY, ROLL VALLEY, ROLL FLASHING

● EAVES TROUGHS, CONDUCTOR PIPES AND FITTINGS

● CEILING PANEL (ACOUSTICAL AND NON-ACOUSTICAL)

● WALL TILE (8 COLOR COMBINATIONS)

● WINDOWS RESIDENTIAL CASEMENT, PICTURE

● STUDS

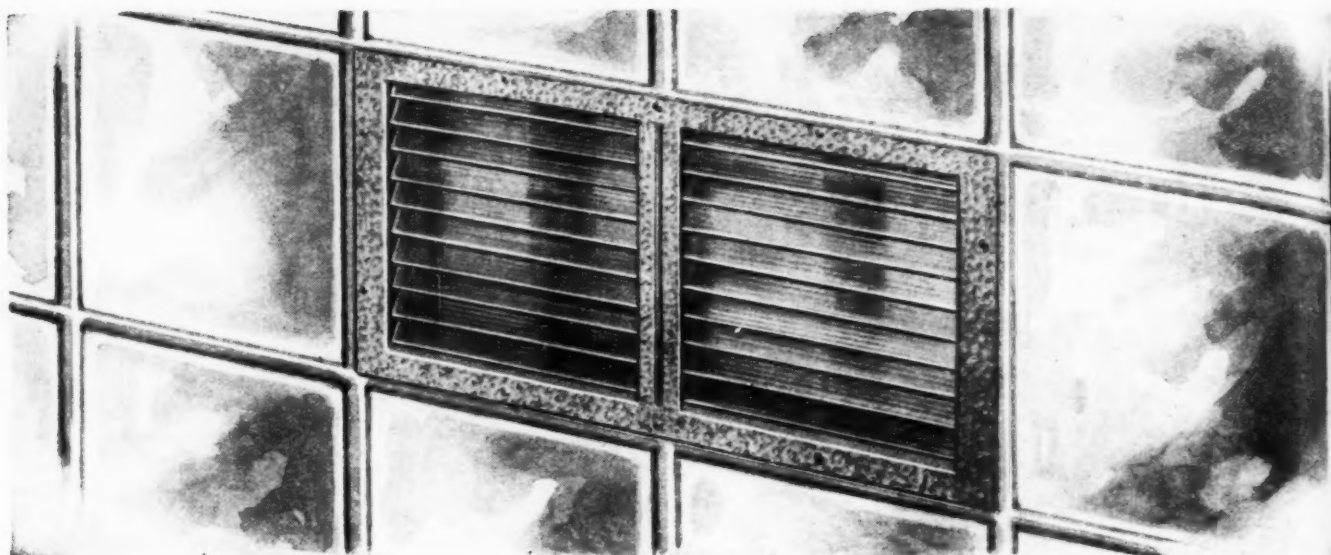
● TRUSSES

● REFLECTIVE INSULATION (METALLATION)

● ALUMI-DROME (FARM & COMMERCIAL UTILITY BLDGS.)

● GARAGE DOORS

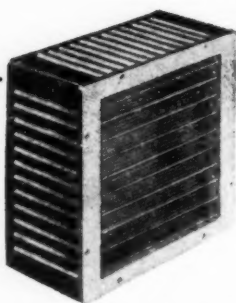




Now!

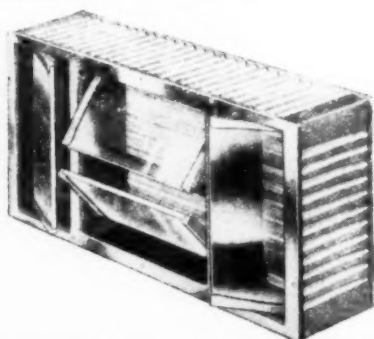
**A NEW POST-WAR DEVELOPMENT
FOR GLASS BLOCK VENTILATION...**

Wind-O-brik



EXTERIOR VIEW OF WIND-O-BRIK

Both the one and two-unit Wind-O-Briks are constructed of cast aluminum... with channels or louver pilots and body cast as one piece for added rigidity. The front frame is held securely in place by nickel screws, and may be easily and quickly removed for cleaning or inspection. Louvers are constructed of top-quality glass and are designed to harmonize with standard glass block. Corrugations are designed to provide maximum mortar adherence.



INTERIOR VIEW OF WIND-O-BRIK

Inside louvers or vanes are made of thick, durable glass... perfectly balanced and arranged to provide complete ventilation, up and down or left and right with just the flick of finger. The rear frame is also securely fastened with nickel screws and may be readily detached for cleaning. An all weather resistant fine mesh screen is located in the body of the unit to retard snow, rain, dust and dirt particles, or annoying insects.

Now you can enjoy all of the advantages of modern glass block construction **PLUS CONTROLLED VENTILATION!** Simply add one or two units of WIND-O-BRIK to any glass wall and presto! You've got fresh air when you want it... as you want it, with no sacrifice of architectural beauty or design!

Made of top-quality cast aluminum... thoroughly tested for rigidity and durability... WIND-O-BRIK is standard sized to fit snugly and gracefully in any glass block construction without danger of air seepage or unsightly appearance. Once installed, WIND-O-BRIK operates simply and quickly... just the flip of a finger gives you ventilation in any desired direction... in any desired amount. WIND-O-BRIK is the biggest addition to glass block construction in years. Investigate this top seller without delay. For full details, write

Consumers Company

228 NORTH LA SALLE STREET • CHICAGO 1, ILLINOIS

Now Available!

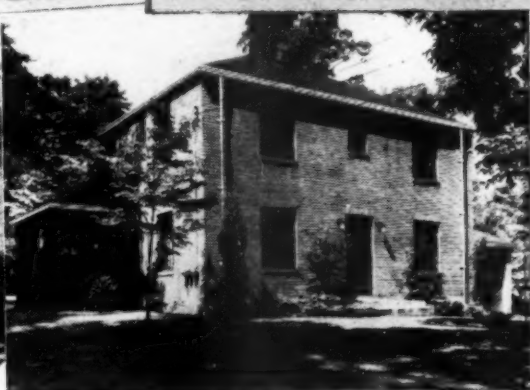
STAINLESS STEEL

FOR GUTTER

DOWNSPOUT

CONDUCTOR PIPE

FLASHING



Architects prefer stainless steel because it is a proven functional material in the modern style. Low coefficient of expansion and contraction eliminates expansion joints....permits greater freedom in design. Stainless steel is beautiful....everlasting....and available right now.

Builders prefer stainless steel because its instant eye appeal and permanent beauty make a better, more salable product. Corrosion-proof stainless steel gutter, downspout, conductor pipe and flashing is light, bright, water-tight . . . never needs replacement . . . can be erected with or without paint. And stainless steel is available right now.

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Sharon, Pennsylvania

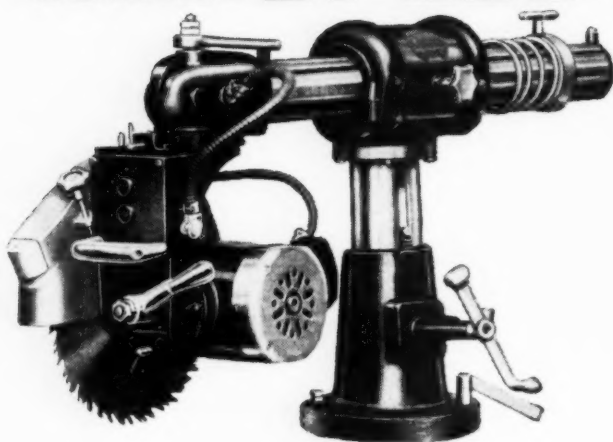
SHARONSTEEL

PRODUCTS OF SHARON STEEL CORPORATION AND SUBSIDIARIES: THE NILES ROLLING MILL COMPANY, NILES, OHIO; DETROIT TUBE AND STEEL COMPANY, DETROIT, MICHIGAN; BRAINARD STEEL DIVISION, WARREN, OHIO; SHARONSTEEL PRODUCTS COMPANY, DETROIT, MICHIGAN, AND FARRELL, PENNSYLVANIA. Hot and Cold Rolled Stainless Strip Steel—Alloy Strip Steel—High Carbon Strip Steel—Galvanite Special Coated Products—Cooperage Hoop—Detroit Seamless Steel Tubing—Seamless Steel Tubing in Alloy and Carbon Grades for Mechanical, Pressure and Aircraft Applications—Electrical Steel Sheets—Hot Rolled Annealed and Deoxidized Sheets—Galvanized Sheets—Enameling Grade Steel—Welded Tubing—Galvanized and Fabricated Steel Strip—Steel Strapping, Tools and Accessories.

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ALL THIS
plus
COMET SPEED



The extreme versatility of Comet Radial Power Saws plus their known super speed cutting offers an unbeatable combination. Contractors and lumbermen everywhere are turning to Comets for purely simple reasons. Comets get more done; offer "more cuts per dollar." They stand the grind year after year. Order from your dealer or write direct.

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To get it faster look in
SWEET'S FILE

One hundred and ninety-five manufacturers' catalogs—1,336 catalog pages—instantly accessible in the 1948 Sweet's File for Builders.

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**SAVE TIME — SAVE TROUBLE
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Distribution Dept.**
119 West 40 St., New York 18, N. Y.

Free
to qualified organizations and individuals

S



Create confidence with the *recognized quality* of
KOHLER BATHROOM FIXTURES

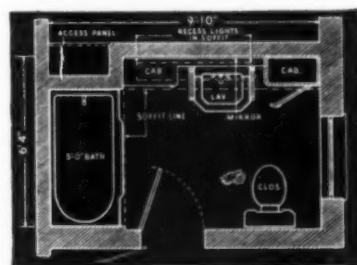
CUSTOMERS are easy to satisfy and to sell when you show them they are getting genuine Kohler quality, and explain the sanitary protection and long serviceability that first quality fixtures mean.

The bathroom above shows a convenient, practical way to arrange Kohler fixtures, with pleasing effect and ample, though compact, storage space.

The Gramercy vitreous china lavatory, with its roomy shelf has a glass-hard, lustrous, easy-to-clean surface.

The Cosmopolitan Bench Bath is of non-flexing cast iron, time-tested base for the heavy coat of lustrous pure white Kohler enamel. It is equipped with the efficient Triton Shower Mixer. The quiet, smooth-working Wellworth closet completes the matched set. All fittings are of durable chromium plated brass, built to the Kohler high standards of quality, which is now a 75-year-old tradition.

Kohler Co., Dept. 13-B, Kohler, Wisconsin.



The Kohler fixtures in this floor plan are conveniently arranged, yet the compact space allows for a large mirror over the lavatory, and two attractively designed cabinets for storage of linens and bathroom supplies.

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS



**You Mean Beautiful
Doors Like That
Actually Cost Less?**

**Absolutely! And My
Builder Told Me They
Keep Their Beauty Years
Longer Because They're**

***Tru-sized* DOORS!**

Reg. U.S. Pat. Off.



When you use Tru-sized Doors and figure all the hours of time and work you save, it's easy to see why *you save money!*

Tru-sized Doors are perfectly sized and squared. There's NO sawing, NO planing, NO fitting, NO priming. Resin prime coating protects them from dirt and moisture.

Available machined for standard lock and hinges, you can hang a Tru-sized Door in almost no time—with just a screwdriver.

Be prepared to answer inquiries from your customers. Write today for FREE information. Dept. 9AB



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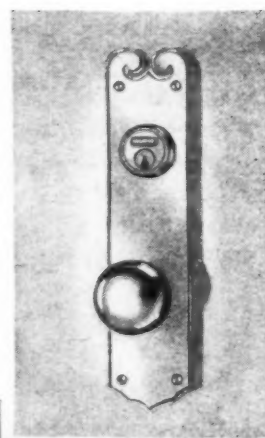
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A MAN'S HOME IS HIS CASTLE...

**And There's
an Appropriate BARROWS for It**

Whether a house is a "pre-fab" to house the hopes of an ex-G. I. and his bride, or a triple-bath apartment on Park Avenue—the designer, builder (and owner's lady too) can bank on Barrows Builders Hardware, each to satisfy a personal viewpoint... be it the grace and charm of the Barrows line, its ease of installation and operation, or its long life. BARROWS is the Builders Hardware for a man's "castle."

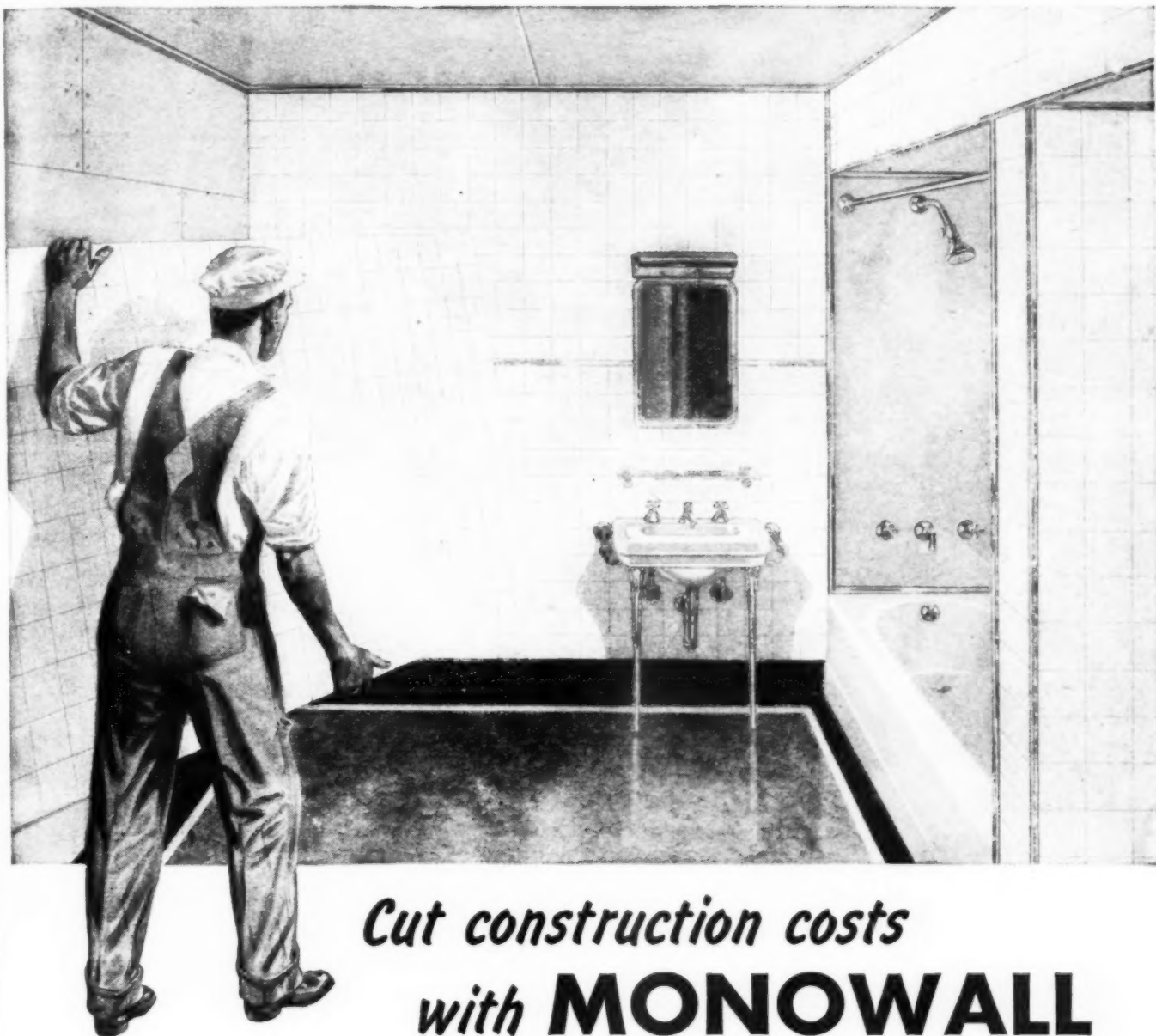


Bank on

BARROWS

NORTH CHICAGO

ILLINOIS



Cut construction costs **with MONOWALL**

Modern dry wall construction with Monowall® saves building dollars. It saves time, too. Armstrong's Monowall goes right up over any flat surface such as Armstrong's Temlok® Lath or gypsum lath. No special preparation is needed. There's no waiting for anything to set or dry. As soon as Monowall is in place, walls and ceilings are finished and the room may be used.

Armstrong's Monowall comes in factory-finished panels. It has a base of tempered wood-fiber hardboard that gives it lasting strength. The durable lacquer surface isn't affected by moisture—and heat or cold won't make it chip, crack, or peel. Because the lacquer is a uniform thickness all over, even on the shoulders of score lines, it has uniform resistance to wear.

Monowall bathrooms or kitchens keep their gleaming new look for years. The glossy surface resists wear, and it's wonderfully easy to clean. A damp cloth wipes off dust and fingerprints. Dirt comes off in a jiffy with mild soap and water.

Monowall comes in three types—plain colors, streamline-designs, and tile-designs. There are four clear bright colors from which to choose. Big panels 4' wide and up to 12' long make it easy to plan walls and ceilings with a minimum of joints. Corners and joints are finished with attractive metal moldings that add a neat trim to the job. For further information and free literature, write to Armstrong Cork Company, Building Materials Division, 1601 Lincoln Street, Lancaster, Pennsylvania.



Armstrong's Building Materials

TEMLOK • INSULATING WOOL • MONOWALL • HARDBOARDS • INSULATED SIDING

3 Strong Points Sell ARMSTRONG'S INSULATING WOOL

Here's a building insulation material that practically sells itself. Just point out to your customers these three important features of Armstrong's Insulating Wool.

1. VAPOR-SEAL PAPER. This tough vapor barrier protects the insulation on its warm side. It keeps moisture-laden air from passing through to damage the wall or reduce insulating efficiency. It also protects the wool against rough handling during installation and provides a handy nailing flange to speed the job.

2. BREATHER PAPER. This paper, which goes on the cold side of the insulation, helps to protect it from damage and is perforated for free circulation of air to help prevent condensation. One-inch spacing of the perforations simplifies quick measuring and cutting on the job.

3. MADE OF FIBERGLAS*. Because Fiberglass is inorganic, it simply can't burn, rot, or decay. And the lightweight, resilient glass fibers never pack down or separate to leave spots where heat can leak through. Your customers can see that for themselves by compressing a sample and watching how quickly it springs back into place. That natural springiness helps hold it in place when it's installed.

Armstrong's Insulating Wool comes in standard Roll Blankets, Batt Blankets, Small Batts, and Pouring Wool. For complete information write to Armstrong Cork Co., Building Materials Div., 1601 Lime St., Lancaster, Pa.



TEMLOK AND MONOWALL ARE REGISTERED TRADE-MARKS. © G-C FIBERGLAS CORP.

Armstrong's Building Materials

TEMLOK • INSULATING WOOL • MONOWALL • HARDBOARDS • INSULATED SIDING

ANNOUNCING...

Truscon FORMED STEEL SURROUNDS for Residential Steel Casements

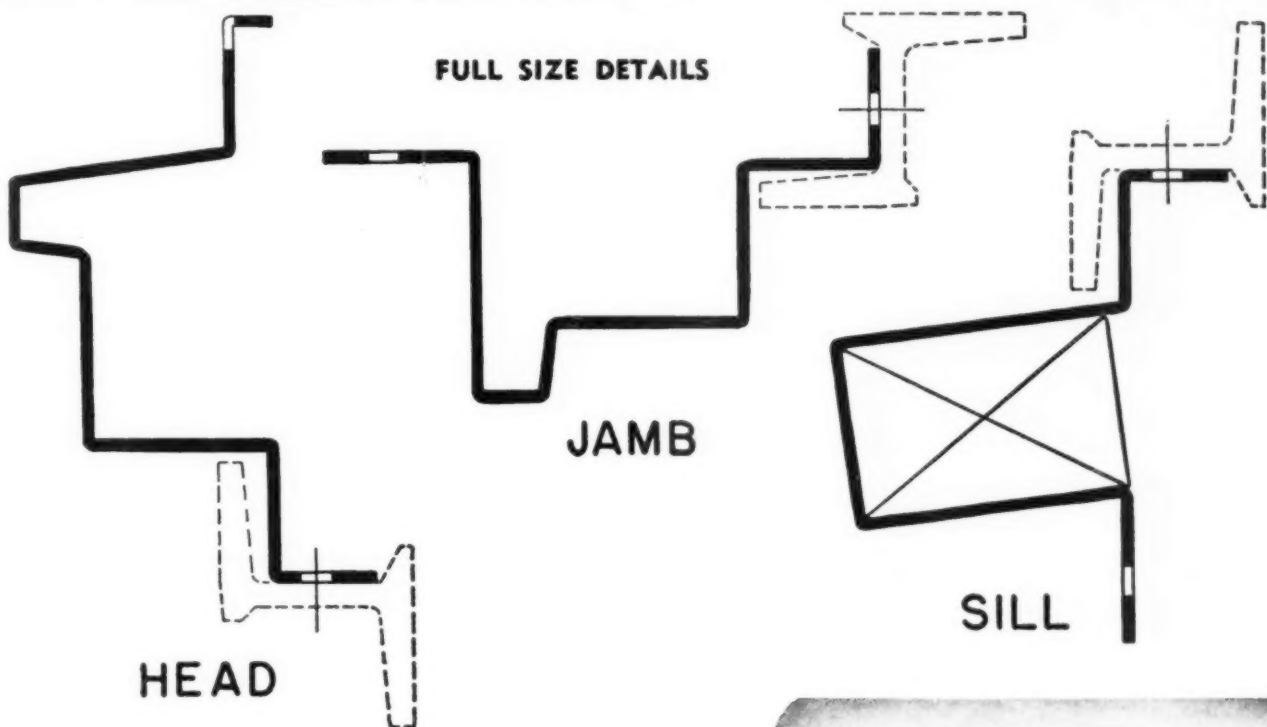


● The introduction of Truscon Formed Steel Surrounds meets the increasing public demand for permanent construction materials. Made of 18-gauge electro-galvanized steel, bonderized and shop-painted with a high-quality baked-on primer, Truscon Surrounds are adaptable for use where a wider and moulded window frame appearance is desired.

Of particular interest to builders in concrete block or similar standard masonry units, are the resultant modular dimensional opening widths when steel surrounds are used with the popular two, three and four light wide casements. The opening dimensions of 3'-4", 4'-8 $\frac{1}{8}$ " and 6'-0 $\frac{3}{8}$ " work in closely with standard 16" modular masonry units, thus permitting the masonry walls to be laid up around window openings with full-blocks and half-blocks at minimum cost. Truscon formed steel surrounds will be available for shipment from warehouses early in 1948. Consult the nearest Truscon sales office for prices and delivery to fit your requirements.

Write for fully descriptive literature.

FULL SIZE DETAILS



TRUSCON STEEL COMPANY

YOUNGSTOWN 1, OHIO
Subsidiary of Republic Steel Corporation

Manufacturers of a Complete Line of Residential Double Hung Windows . . . Residential Casements . . . Security and Basement Windows . . . Screens and Storm Sash . . . Metal Lath Products . . . Industrial Steel Doors . . . Coal Chute Doors . . . Steel Lintels . . . Concrete Bars . . . Welded Steel Fabric.

ON THE RECORD AT SARGENT & COMPANY

You Can Now Select
From 11 Functions of the

INTEGRALOCK*
PRECISION BUILD



● The Sargent Integralock* is a revolutionary type of cylinder lock. Precision-made of the finest, strongest materials, the Integralock provides an unusual degree of security. It is handsome in finish and design. It costs less to install. And an Integralock entirely eliminates maintenance costs. Your Sargent Distributor can give you quick delivery now on the Sargent Integralock in all of the 11 functions shown above.

*Trade Mark



SARGENT & COMPANY
NEW YORK • NEW HAVEN, CONN. • CHICAGO

News, Views and Comments

On and Off the Record

MATERIAL SHORTAGES—Nails, soil pipe, millwork, gypsum products and plumbing supplies continue to be in short supply in many areas.

NAILS—Shortages are spotty, with dealers in Iowa, Nebraska, Minnesota and the Dakotas reported to have full inventories, and many eastern cities unable to get enough to carry on operations. With no factory inventories in the spring, and production down in the southern plants during the summer, shortages in critical areas were aggravated. Manufacturers blame OPA, whose price policies drove many small manufacturers out of business, curtailed production in large mills. Also blame declining man-hours production. State supply should improve somewhat.

SOIL PIPE—OPA again. Many manufacturers driven out of business. In Chicago alone, only three out of eleven survived OPA. Producers believe will get supply caught up with demand if can get labor performance improved. Outlook for early 1948 not too hopeful.

MILLWORK—Principal bottleneck is railroad car shortages. California receipts of shop lumber for millwork reported adequate, because can ship from northern mills in open cars without fear of damage from weather. Lack of adequate closed cars, necessary to protect shop lumber from weather on long haul to eastern markets results in short supply to Mississippi River and eastern millwork plants. Labor production, reported about 75 per cent of prewar, is another reason assigned for shortages.

NEW USES—Use of shop lumber to manufacture crates, furniture and other wood products diverts some from millwork industry. Improvement in general lumber supply expected to stop diversion. Distribution methods peculiar to lumber industry do not permit any but largest manufacturers of lumber to control end use of products. Gradual improvement expected throughout 1948.

GYPSON—Prewar production of gypsum board was 2½ billion feet a year. New plants now being readied, plus improved production methods, will increase 1948 production to 4½ or 5 billion feet. Since war, OPA paper

price ceilings drove paper for gypsum board out of production. Industry could have stepped production up 50 per cent in 1945 and 1946 if it could have got paper. Small gypsum board manufacturers driven out of business by OPA, and large ones forced to curtail production. After OPA, building trades strikes delayed completion of new plants. Man-hour production down, but ample supplies probable in fall of 1948.

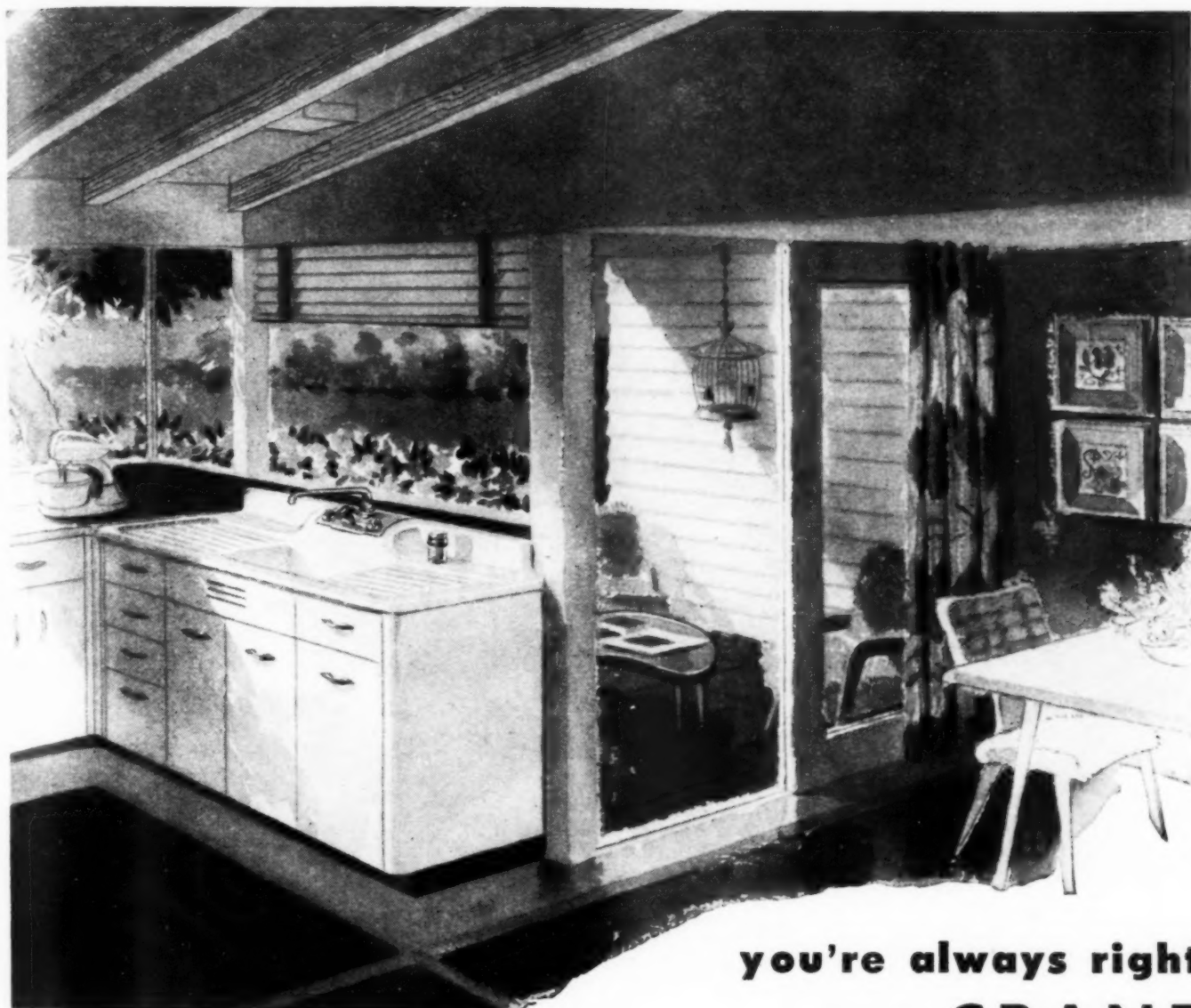
PLUMBING SUPPLIES—Supplies of manufactured items depend on supply of sheet steel. If Committee on European Economic Development has its way, supply in 1948 will be 3½ million tons less for domestic use in 1948 than in 1947. If demand holds and exports do not increase, supply of steel for domestic fabrication into manufactured steel products will increase 1½ million tons in 1948 over 1947. Reasonable chance for measurable improvement in 1948.

PONDEROSA PINE—The industry produced 20 per cent more windows and doors in 1947 over 1946, but was slightly below the 1935-1939 average. Scarcity of shop lumber and door panel stock kept production gains down. Industry expects to increase 1948 production by 60 to 68 per cent over 1947, and expects competition for shop lumber from other buyers to decrease.

LUMBER—Industry producing at rate of 32 to 33 billion feet in 1947, which is highest in past 25 years with exception of two war years, when production was under forced pressure. In spite of labor troubles, all of which were settled by October, 1947, production was over the 1946 level. Outlook for 1948 is good.

GRAY MARKETS—Stories about gray market operations in nails, gypsum board and millwork are a dime a dozen. Some of them have been proved to be true, others undoubtedly are true. Evidence submitted up to date, however, does not indicate nationwide gray market ring in control of supply.

MANUFACTURERS—Where they suspect gray market transactions, they are unable to do much because of fear of federal charge of attempting to control distribution or prices.



**you're always right
...with CRANE**

In choosing Crane, you know that many things confirm your choice.

- **Crane is correct** . . . correct in styling to complement good room design. Crane offers a right style for every taste—a right price for every building budget.
- **Crane is complete** . . . everything to please the most exacting client. Crane quality is expressed in the lasting gleam of the finish . . . the dependable service . . . the finger-tip *Dial-ese* controls.
- **Crane is preferred** . . . year after year, nation-wide surveys prove that Crane is far and away the best known name in plumbing.

The uncompromising quality of Crane Sinks extends to Crane bathroom and laundry fixtures, too—and to a full line of heating equipment for any system and any fuel.

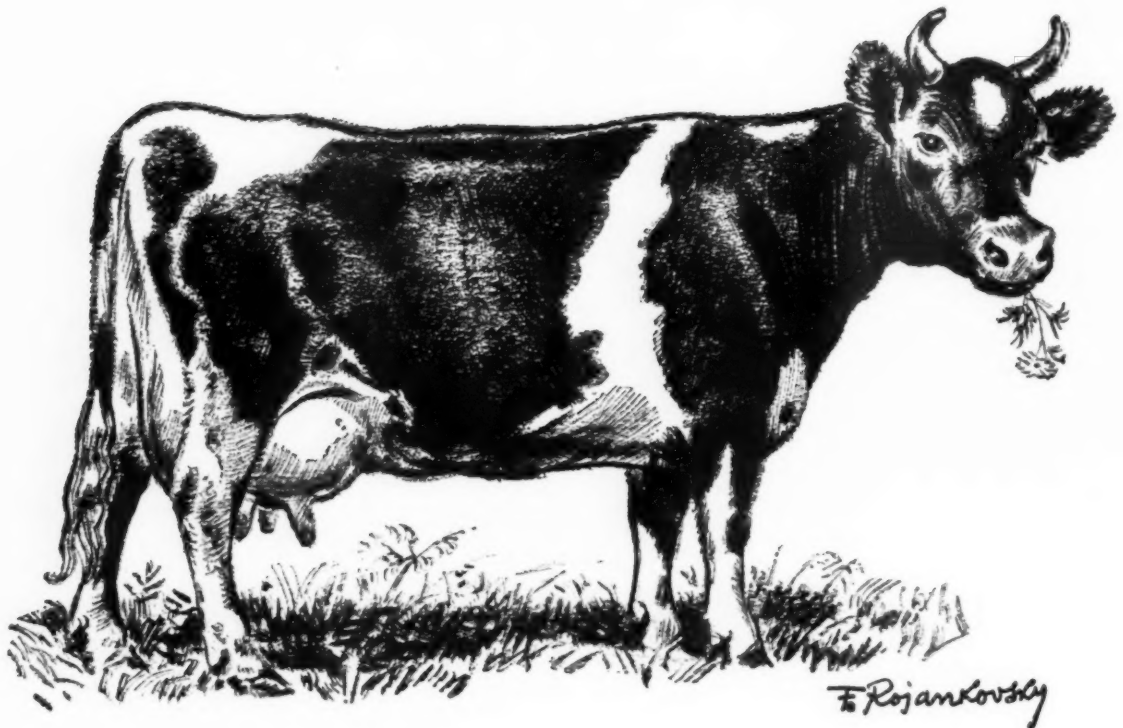
All are represented in the Sweet's Builders' File. Of course, it is still true that certain fixtures are more available than others—check your requirements with your Crane Branch.

CRANE

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

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PLUMBING AND HEATING
VALVES • FITTINGS • PIPE



HOW TO HAVE...

contented customers

To have contented customers, popular home-buyer trends must be recognized. Today the trend is to Electric Ranges. Another million American families switched to Electric cooking last year. Estimates indicate that this year over a million more Electric Ranges will be installed.

This is a definite trend that cannot be ignored. Progressive builders recognize this trend. Electricity is a "must" in any house. It's simple and economical to include wiring for an Electric Range leading to a range outlet in the kitchen at the time of construction. This is assurance that the houses you build are not only modern today, but will stay modern for years to come!



Electric Range Section
NATIONAL ELECTRICAL
MANUFACTURERS ASSOCIATION
155 E. 44th Street
New York 17, N. Y.

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ADMIRAL • CROSLEY
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FRIGIDAIRE
GENERAL ELECTRIC
GIBSON • HOTPOINT
KELVINATOR • LEDO
MONARCH • NORGE
QUALITY • UNIVERSAL
WESTINGHOUSE

Follow
the trend...

WIRE YOUR HOUSES FOR ELECTRIC RANGES

Another 1,000,000 American families switched to Electric Cooking last year.



LETTERS

Try FHA

To the Editor: A most interesting article entitled "Home Building Made Easier" appears in your October issue. Most small builders have found themselves hampered by the reluctance of financial institutions to grant them the same credit available to other business men, whether or not they have received FHA commitments on their proposed construction.

The example of the builder with \$10,000 who wishes to put up 25 houses and finds it possible to do so with that amount of cash under Section 603 would appear to solve all the problems of the industry. The only fly in the ointment is the fact that we know of no lending institution in this area which will grant the liberal building loan (up to 100 per cent of the mortgage commitment) necessary, or which will provide a schedule of payments under this loan as liberal as that outlined in the article.

There is one further problem. In this section, at least, few of the houses presently being built will either sell for, or have a necessary replacement cost of only \$8,900, which will make the maximum FHA commitment equal exactly 90 per cent of the total, which was the intent of Section 603.

We would be most interested in having your writer put us in touch with the lending agency who will make the proposition outlined in your article referred to above. We are ready to build a lot of houses if we can obtain credit along the lines mentioned. — WILLARD BLEYER, Pennurban Housing Corp., New York, New York.

Power tools in England

To the Editor: The Ministry of Works in England has been studying the economies to be obtained with powered hand tools, for site building operations. The results obtained from calculated costs have proved somewhat inconclusive, and a suggestion has been made that information may exist in this country on this subject.

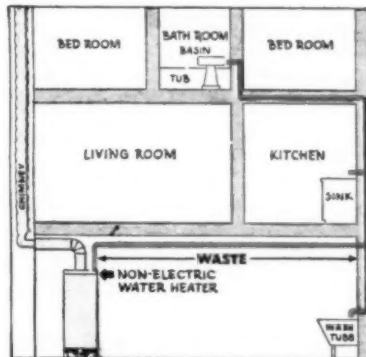
I have been asked whether there is any evidence in this country of the extent to which powered hand tools are actually used in construction work on the building site. The fact that a large number of powered hand tools are marketed in this country must be an indication that they are widely used. But I can find no source from which it is possible to obtain figures indicating which tools are in common use, and which are used by a more limited number of contractors. — COLIN LUCAS, British Commonwealth Scientific Office, New York, New York.

HERE'S A NEW STEER!



And this is really a good "steer." It's the trend of home buyers' preference for automatic Electric Water Heaters.

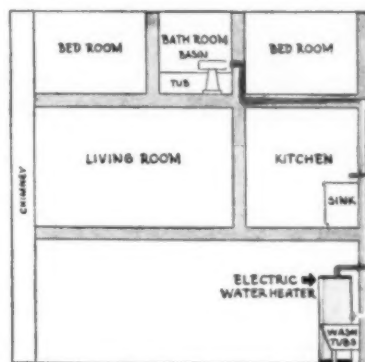
How to reduce construction costs and add customer features...



NON-ELECTRIC INSTALLATION

Construction costs can be reduced with Electric Water Heaters because there's no flue or vent, so installation can be made anywhere—in a closet, in the kitchen, in the bathroom, in the utility room. Hot water lines can be short, cutting piping cost.

Customers like Electric Water Heaters



ELECTRIC INSTALLATION

because they are: (1) **AUTOMATIC** (continuous hot water, no attention); (2) **CLEAN** (smokeless, sootless); (3) **DEPENDABLE** (short hot water lines; no flue or vent); (4) **TROUBLE-FREE** (as electric light); (5) **ECONOMICAL** (plenty of hot water, fully insulated storage at low cost); (6) **SAFE** (all electric); (7) **FLEXIBLE INSTALLATION** (can be located in living quarters; does not consume oxygen.)

Electric Water Heater Section **NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION**
155 East 44th Street, New York 17, New York

B & F • CLARK • FOWLER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM • JUD WHITEHEAD • KELVINATOR • MONARCH • NORGE • PEMCO • REX • RHEEM • SEIDELHUBER • SELECTRIC • SMITHWAY • SUNBEAU • THERMOGRAY • THERMO-WATT • UNIVERSAL • WESIX • WESTINGHOUSE

IT'S EASY TO INSTALL an electric WATER HEATER!

... in a house wired for an Electric Range

WITH

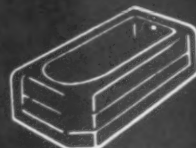
ELJER

..YOU'LL GO AHEAD!



HERE ARE 6 GOOD REASONS WHY:

- ★ A good name with ever-growing acceptance
- ★ A complete line of fine vitreous china and enameled cast-iron plumbing fixtures
- ★ A complete line of brass goods
- ★ Modern manufacturing facilities and methods
- ★ Planned advertising that helps you sell
- ★ Pleasant and profitable business relations

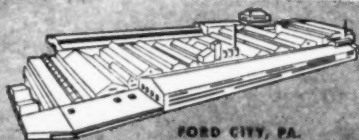


Get ready NOW to cope with the great competitive market that is soon to come. Enjoy the advantages of relations with a source of fine plumbing fixture supply which is aggressive and alert in its methods, well grounded in experience and completely capable of giving service that is mutually profitable and pleasant.

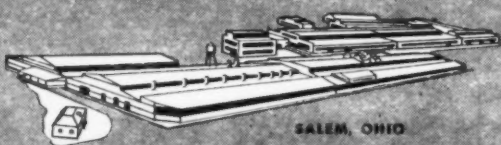
Eljer's sole business is plumbing

fixtures and quality brass goods. Over four decades of manufacturing "know how" is embodied in each item of this large, complete line. A strong, consistent trade and consumer advertising program is gaining more and more recognition for Eljer everywhere. See your Eljer wholesaler or write:

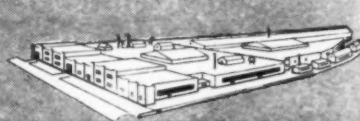
ELJER CO., FORD CITY, PA.



FORD CITY, PA.



SALEM, OHIO



LOS ANGELES, CALIF.

PLUMBING FIXTURES ARE OUR EXCLUSIVE BUSINESS

17 Acres of It!

MAKERS OF FINE PLUMBING FIXTURES SINCE 1904

MONTHLY REVIEW



NEWS OF THE NATIONAL ASSOCIATION OF HOME BUILDERS AND AFFILIATED ASSOCIATIONS

NAHB 1948 Convention and Exposition To Show Many Genuinely New Products

As plans for the 1948 Convention and Exposition of NAHB near completion, it is evident that exhibitors plan to show much that is really new in building materials. As production increases, products of wartime research are being readied for the market, and many will make their first appearance at the Chicago show, during the week of February 22.

According to W. Hamilton Crawford, chairman of the show committee, there are going to be so many exhibits to visit and study, and so many fine speakers, panel discussions and clinics, that each builder attending will have to budget his time very carefully to take in all of the activities that are scheduled.

In addition to the general exhibits, there will be two supplementary displays of an educational nature—one in the Congress Hotel, and one in the Hotel Stevens. The first will be a comprehensive display, organized by the NAHB Community Planning Committee headed by W. P. (Bill) Atkinson of Oklahoma City. The second will be under the direction of Cliff May

of Los Angeles—an exhibit by a dozen leading magazines in the trade and consumer fields, dealing with ways and means of building better houses. Each magazine will have 30 feet of display space to show what consumer research has uncovered about what people want in new homes, or what the trade has to offer to give them better homes at lower cost.

The importance of the commercial exhibits is evidenced by the large number of personnel that most manufacturers will have on hand for the show. Men will come from factories and regional offices and will include key executives ready to answer questions of builders, architects, dealers, distributors and others.

With the additional display space above that available in 1947, more exhibits can be accommodated. At least 30 new exhibitors plan to show this year. The total list includes 114 manufacturers. All space in both the Hotel Stevens and Hotel Congress has been taken.

The hotel situation is the best this year that it has been since before the war. Hotel

reservations were being accepted by the Housing Bureau staff at the convention headquarters after December 15, and still are being accepted and confirmed. Arrangements have been made with leading downtown hotels to house sufficient guests, so that it is not expected any will have to be sent out of the downtown area of Chicago.

Hotel advance reservation blanks have been sent to every local, affiliated association officer and to all members of NAHB who are not affiliated with a local association. Members of local associations can obtain reservation blanks from their association executives.

Other persons who wish to attend should address their reservation requests direct to Convention and Exposition Headquarters, 111 West Jackson Blvd., Chicago. Each must be accompanied by a check for registration fee, \$10 for men and \$5 for women. State the type of accommodation desired, date of arrival and your business classification. Make checks payable to the National Association of Home Builders.

The National Association of Home Builders of Canada is much interested in the exposition, and their secretary-manager, Joseph T. Crowder of Toronto, reports an attendance of about 100 may be expected from the provinces.

EXHIBITORS SCHEDULED FOR NAHB 1948 NATIONAL CONVENTION AND EXPOSITION

Air Control Products, Inc.
Airtemp Div.—Chrysler Corp.
Air-O-Cel Co.
Altorfer Bros. Co.
Aluminum Bldg. Products Co.
Aluminum Window Corp.
The American Brass Co.
American Builder
American Central Div.
AVCO Mfg. Corp.
American Gas Ass'n.
American Radiator & Standard
Sanitary Corp.
Apex All-Weather Products Co.
Arketex Ceramic Corp.

Bar-Brook Mfg. Co., Inc.
Bell & Gossett Co.
Bendix Home Appliances, Inc.
Berry Door Corp.
Briggs Mfg. Co.
Bryant Heater Co.

The Philip Carey Mfg. Co.
Ceco Steel Products Corp.
Celotex Corp.
Chase Brass & Copper Co.
Chicopee Mfg. Corp.—Lumite
Div.
Chromite Co.
The Coleman Co., Inc.
Condensation Engineering Co.
The Cor-O-Aire Heater Corp.
Crane Company

Cupples Products Corp.
Detroit Steel Products Co.
Dewalt, Inc.
Duplex, Inc.
Eagle-Picher Sales Co.
Eljer Co.
Federal Industries, Inc.
Firestone Industrial Products Co.
Frigidaire Div.—G.M.

Gate City Sash & Door Co.
Given Mfg. Co.
General Plywood Corp.
Gerity-Michigan Corp.
Great Lakes Steel Corp.—Stran-
Steel Div.

Harrison Steel Cabinet Co.
Heating Research Corp.
Higgins, Inc.
Hill Termite Control Systems
Edw. Hines Lumber Co.
Homasote Co.
Horton Mfg. Div.—Aviation Corp.
Hotpoint, Inc.

ILG Electric Ventilating Co.
Illinois Bell Telephone Co.
Insulite Div.—Minnesota &
Ontario Paper Co.
International Oil Burner Co.

Johns-Manville Sales Corp.
Kaiser Fleetwings Sales Corp.

Kimberly-Clark-Kimsul Div.
Kohler Company
Libby-Owens-Ford Glass Co.
Lockport Cotton Batting Co.
Marathon Foundry & Machinery
Co.
Jay G. McKenna, Inc.
Maske Bros. Sales
L. J. Mueller Furnace Co.
Mullins Mfg. Corp.

Nash-Kelvinator Corp.
National Adequate Wiring Bu-
reau
National Appliance Co.
National Electric Products Corp.
New Castle Products
Nordberg Mfg. Co.
Norge Div.—Borg-Warner Corp.

Owens Corning Fiberglas Corp.
Owens-Illinois Glass Co.
Parents Magazine
Pittsburgh Corning Corp.
Practical Builder
Pratt & Lambert Inc.
Premier Metal Products Corp.
Pryne & Co., Inc.

Reynolds Metals Co.
Rheem Mfg. Co.
Richmond Fireproof Door Co.
R. O. W. Sales Co.
H. B. Salter Mfg. Co.

Servel, Inc.
Skilsaw, Inc.
A. O. Smith Corp.
Southern Sta-Dri Distributors
Speakman Co.
Spickelmeier Industries
Standard Dry Wall Products, Inc.
Standard Fabrication, Inc.
Sterling Tool Products Co.
Stone Machinery Co., Inc.
The Supervent Co.
Surface Combustion Corp.
Symons Clamp & Mfg. Co.

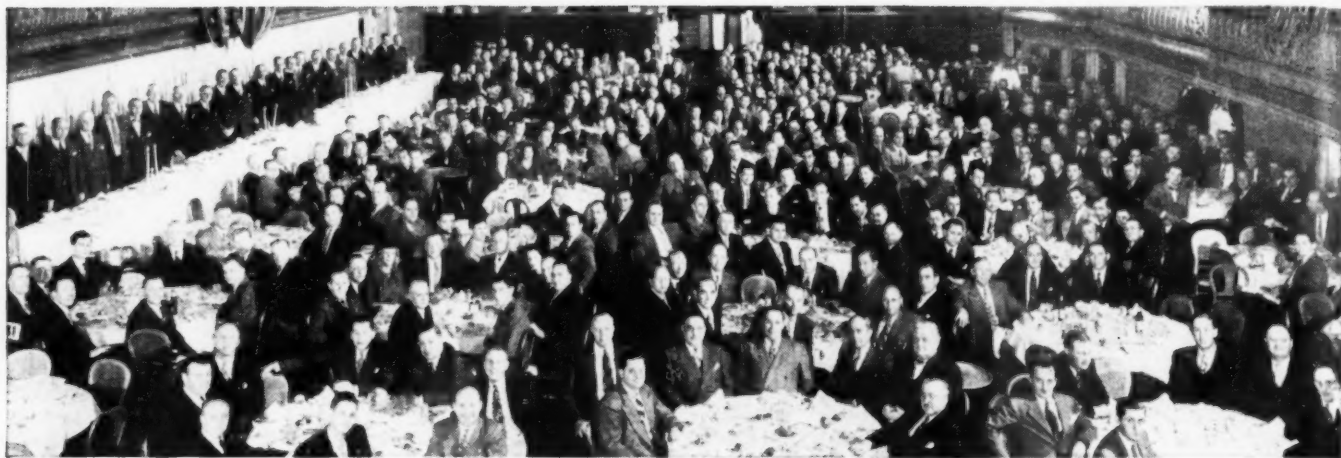
Thermador Electrical Mfg. Co.
Thor Corp.
Timken Silent Automatic
Titewall Hanger Co.
Trion, Inc.
Truscon Steel Co.

U. S. Gypsum Co.
United States Plywood Corp.
United States Rubber Co.
Universal Zonolite Insulation Co.

Ware Laboratories, Inc.
Westinghouse Electric Corp.
Wheeler, Osgood Co.
White-Rodgers Electric Co.
W. A. Wollander

Zegers, Inc.
Zephyr All-Weather Awning Co.,
Inc.

Plan Now to Attend or Exhibit at the NAHB Convention February 22-26, 1948



THE FHA Clinic in Chicago was attended by over 600 persons interested in mortgage insurance

FHA Clinic Staged by Chicago Group May Set Pattern for National Trend

The two-day FHA Clinic, original idea of the Chicago Metropolitan Home Builders Association in which loan and land development groups collaborated, met with such approval from those participating that it may well set a pattern that will be followed in other parts of the country. Staged in Chicago in late November, it was attended by over 600

family dwellings under Title II, Section 203 and Title VI, Section 603.

Franklin D. Richards, FHA commissioner from Washington, represented the national agency in a wind-up speech at the close of the clinic. Edward J. Kelly, FHA director for the Northern Illinois District, served as moderator. He presented speakers from FHA, covering underwriting, architectural design requirements, valuations and administrative aspects of the agency.

Nathan Manilow, president of the Chicago association, presided. Other groups cooperating with the home builders included the Chicago Real Estate Board, Chicago Mortgage Bankers Association, U. S. Savings & Loan League and the Land Developers Association.



FRANKLIN D. RICHARDS
FHA Commissioner

builders and guests, interested in a closer knowledge of how FHA works in order that they might use its services better.

The entire first day was devoted to discussion of Title VI, Section 608 procedure, on the assumption that Congress will authorize further insurance under that title to permit continuance of rental housing construction which has been so stimulated by the measure that funds were exhausted months ahead of expectations. The consensus was that it would be best not to inject any controversial issue as an emergency measure at the special session of Congress, and that only an extended authorization of about a billion dollars should be sought. It is believed that the desired higher minimum mortgages on single family dwellings and higher per-room authorizations for multiple dwellings can be sought at the regular session.

The second day was devoted to single

Dayton Builders Elect New Officers for 1948

The Montgomery County Builders Association at its annual meeting December 9 at Dayton, Ohio, elected new officers for 1948. Paul Lapp was elected president. Stanley Swango, Jr., is vice president, M. E. Kimmey, secretary, and Jerry Friedman, treasurer. The retiring president is C. W. Sharp who, with Robert J. Haverstick, Paul V. Morris, Delbert Stauffer and Glenn Smith, form the new board of directors.

The association is an affiliate of the Ohio Home Builders Association and the NAHB. The meeting was arranged by E. Clarke King, executive secretary. During the dinner, a string trio played three new songs composed by Secretary King. The speaker was E. G. Gavin, editor of *American Builder*.

California Contractors Hold Convention



THE Board of Directors of the Building Contractors Association of California

The fifteenth annual congress and builders' conference of the Building Contractors Association of California was held recently in Los Angeles with an attendance of 300. An exhibit of new buildings materials was staged by 30 manufacturers on invitation, and with the condition that only new, postwar materials be shown. The association elected

Vern R. Huck of Los Angeles as president. Other officers are: First vice president, Marshall Tilden, Riverside; second vice president, Glenn Bailey, Santa Anna; secretary, R. J. Glassco, Temple City; treasurer, Harry Hanson, Los Angeles. Frank Cortright, executive secretary of NAHB, was the speaker at the evening banquet.

Fourth Annual Convention Held by Ohio Association

With a registration that compared favorably with the attendance at previous meetings, the Fourth Annual Convention of the Ohio Home Builders Association was held in Cincinnati on December 4 and 5. The convention was formally opened with a noon lunch, at which A. J. Alexander, association president, presided. Toastmaster Francis A. Hendy, president, Home Builders Association of Greater Cincinnati, introduced Cincinnati's mayor, Carl W. Rich and E. G. Gavin, editor, *American Builder*, who were the speakers.

The afternoon session opened with a panel discussion, led by Lockwood C. Doench, past president of the Cincinnati association. The subject was, "Where is the Home Building Industry Going From Here?" A second panel, led by George Goudreau, dealt with "New Methods and Materials."

The banquet on the first day was addressed by Douglas Whitlock, chairman, Building Products Institute. A panel discussion on the second day was led by Joseph B. Haverstick, and dealt with housing the low income group. The lunch meeting was addressed by W. J. Guinan, executive director, Builders Association of Metropolitan Detroit, and the banquet speaker was Joseph E. Merrion, Chicago, past president, NAHB. Principal addresses were by George Goudreau on "Analysis of Business Trends," and Chester C. Sudbrack, Cincinnati Real Estate Board, on "Selling Homes Tomorrow."

Officers elected for the coming year are: President, Earl W. Bailey; Youngstown; vice president, Francis A. Hendy, Cincinnati; secretary, Peter Kleist, Cleveland; treasurer, Ivan H. Gore, Columbus.

New Officers Are Elected By Portland Association

The new president of the Portland Home Builders Association is Herman A. Schmitt, and the vice president is Thomas B. Winship. Palmer Biggness is secre-



H. A. SCHMITT



T. B. WINSHIP

tary-treasurer, and John J. LaPorte is sergeant-at-arms. Elections were held December 1. The executive board includes Arthur Hanson, Alfred Norbraten, Ralphard L. Harris, Ernest Gohrband, Fred W. Alt and Clarence Tobin.

Cortright's Column

By Frank W. Cortright

Executive Vice-President, National Association of Home Builders of the United States



The Federal Government and private industry have turned their guns on shortages in home building materials and the rapidly accelerating gray or black market in their distribution. There is hope that some of the investigations now being carried on will explode the bottleneck that is hampering home construction.

The harmful potentialities of shortages, gray market operations and the threatened dislocation of the materials distribution system in certain areas were recognized late last summer by the National Association of Home Builders, when it conducted a nationwide survey to determine where builders were being pinched hardest.

Since that time, the movement to find out why the materials are not available has snowballed rapidly. The special Joint Committee on Housing, headed by Representative Ralph A. Gamble, in its hearings around the country discovered that there is unquestionably a growing black market. Accordingly, it put its own investigators to work, and currently is bombarding manufacturers with questionnaires to find the cause of shortages and where material is going.

In addition to its overall survey, NAHB conducted spot surveys in representative building areas, and asked builders to submit concrete, well-documented evidence on actual experiences in bucking the black market. This evidence has been turned over to the special committee and to the Federal Trade Commission which is conducting its own survey.

Senator Ralph E. Flanders, Republican, of Vermont, chairman of a subcommittee of the special Joint Committee, called a meeting of nail manufacturers to find the answer to one simple question: "Why aren't the home builders getting nails?"

Beyond that, the House Public Works Committee, of which Representative George Dondero, Republican, of Michigan, is chairman, has asked Congress for \$25,000 to investigate what it calls a rampant black market in building materials. Chairman Dondero said black market operations are boosting both public works and housing costs and, in some cases, are actually preventing necessary construction.

Out of these many approaches, it does seem that some good must come. The various studies all show that nails and gypsum products particularly are in the clutch of the gray market. Production on these is substantial, but the home builder finds them increasingly hard to secure at a fair price. Regular channels of distribution have been by-passed, with nails and other building materials offered for sale by lingerie shops, feed stores or unknown fly-by-night exporters and brokers. There is fear that other scarce items such as millwork, plumbing fixtures, galvanized steel pipe, soil pipe and hardwood flooring are going into the gray market.

On the optimistic side, there is convincing evidence that home builders are delivering new houses to veterans at average prices considerably lower than generally realized. This evidence is furnished by recent FHA studies of the home loans it insured last year. From January through October, the average FHA loan was \$6,941.

Add to that the fact that FHA is doing the greatest amount of business in its history, and it is clear that a great volume of new houses at reasonable prices is reaching the market. This is backed by a VA announcement that home sales to veterans under GI loans now average 48,000 monthly. The average price for new houses bought with a GI loan is \$8,200 and for used houses, \$6,675.

It is apparent that the bulk of houses being built today is not high-price, upper-bracket housing at all. The fraction of higher-priced houses being produced is shown by these reports to have led many persons to erroneous conclusions about what veterans actually are paying. With the advantage of long-term financing, long advocated by home builders, the monthly cost of new houses to veterans has actually been brought to the cost level of other commodities.

Builders Conference Reveals Shortages Will Continue in East Through Spring

A searching analysis of the building materials supply situation, item by item, at the Home Builders Conference in New York last month reveals that short supply



OTTO J. HARTWIG,
Council Secretary

in vital commodities will continue there for at least another six months.

The conference was sponsored by the Home Builders Council of New York, New Jersey and Connecticut and its affiliated associations. Despite the handicap of a postponement and snarled transportation, Secretary Otto Hartwig secured an attendance of about 800 people.

The panel discussions brought out the following facts. The increase in lumber production last year totaled about 10 per cent, but yard inventories still continue

short and will be short. Freight car shortages hold down shipments and dealers are reluctant to stock heavily in the upward spiralling price market. More increases in lumber prices can be expected in the next month or two.

Nail production is reported at 16 million kegs a year, and a million housing starts ought not to require more than five million kegs—yet supplies cannot be obtained through regular channels in the east. Scrap dealers are reported insisting on nails in payment for scrap at the mills instead of money. These then are sold in the gray market. Prices run from \$12 to \$19 per keg.

Lack of paper is claimed responsible for shortage of gypsum lath, yet sheet-rock and wallboard, requiring paper, are available. Toilet fixtures must be bought in the gray market at double price. Black steel pipe cannot be bought pre-threaded and is double price.

Asphalt roofing production is increasing, but manufacturers are pressed to secure ample asbestos fiber which is in short supply. The cost of the fiber is up 50 per cent over prewar cost, and manufacturing costs may force still more price increases in roofing materials.

It is expected that the Marshall plan will affect the building material supply situation in 1948 because of increased exports to European countries.

The panel on building material costs included spokesmen for the various industries covered, and was presided over by James Graham, conference chairman. Carl

ASSOCIATION SPONSORED HOME SHOW SCHEDULE

March 6-14—Shreveport, La.; Municipal Auditorium
March 28-April 4—Seattle, Wash.; Field Artillery Armory
April 3-10—Hartford, Conn.; State Armory
April 7-14—San Francisco; Civic Auditorium
April 10-18—Oklahoma City; Municipal Auditorium
April 11-18—Memphis, Tenn.; Shelby County Building, Fairgrounds
April 17-23—New York City; Grand Central Palace
May 8-16—Dallas, Texas; General Exhibit Hall, State Fairgrounds

L. Carlson, vice president of the Home Builders Association of Northern New Jersey, was moderator.

Kalman Klein, president of Long Island Home Builders Institute, conducted another panel on other factors affecting costs, including public housing, tax factors and improvement practices. Henry Shaheen, chairman of the council, presided at the luncheon meeting where Frank Cortricht, executive vice president of NAHB, reported on European housing conditions. E. M. Spiegel, president of the Northern New Jersey association, told the building record of private industry for 1947. Two sessions on FHA financing were conducted by Irving Lipsig, president, Home Builders Association of Westchester, and Willard Closs, New Jersey Home Builders Association.

Detroit Builders Vote Cut In 1948 Housing Starts

In a move to combat the growing gray market in building materials, the Builders Association of Metropolitan Detroit has voted unanimously to reduce the number of housing starts in 1948. It is the consensus of members that such action will have the ultimate effect of increasing the number of homes completed, but that the upward price spiral will be checked.

In 1947, approximately 28,000 housing starts were made in the Detroit metropolitan area. Up to four months ago, there was no appreciable black market situation in that part of the country, but now it is the rule. Builders declare it is due to the material supply being so short that there is only enough to finish three out of each four houses under construction. Because this has led to competitive bidding among the builders, they feel they have been creating headaches for themselves by the number of homes they have tried to get under way. Therefore, their decision was that they would tailor production to bring demand into conformity with supply. When materials are easier, they will again step up their production.

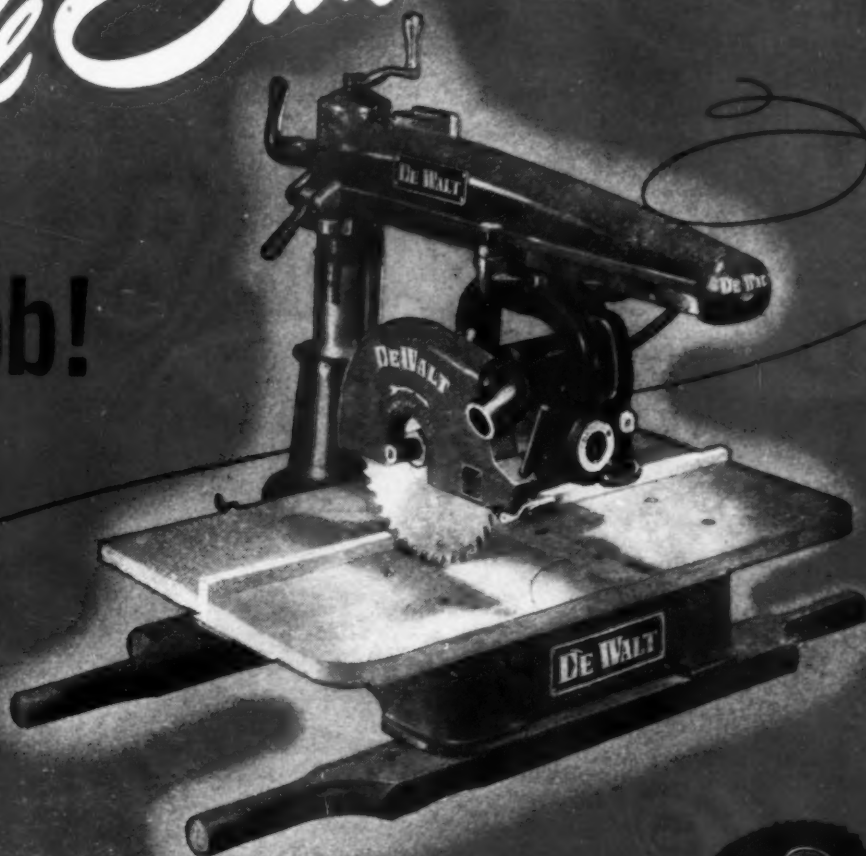
Rochester Home Show Draws 50,000



A CROWD of 50,000 persons visited the home show in Rochester, N.Y., sponsored by the Rochester Home Builders Association. The central theme of the show was the exhibit built around the association's Ramona Park 608 project which is to provide low-rental apartments for 136 veterans' families. Here at the exhibit are: Joseph Entress, association president; Mayor Samuel B. Dicker of Rochester; and M. S. Abbey, vice president of the association. Two-bedroom apartments in the project will rent for \$50 monthly.

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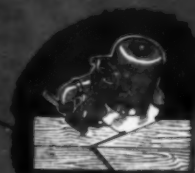
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TO VERSATILE HARDBOARD

THE LEADING HARDBOARD

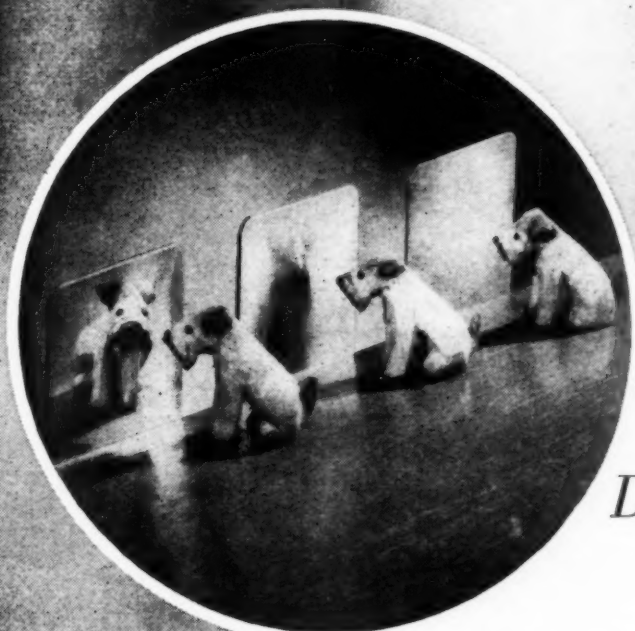
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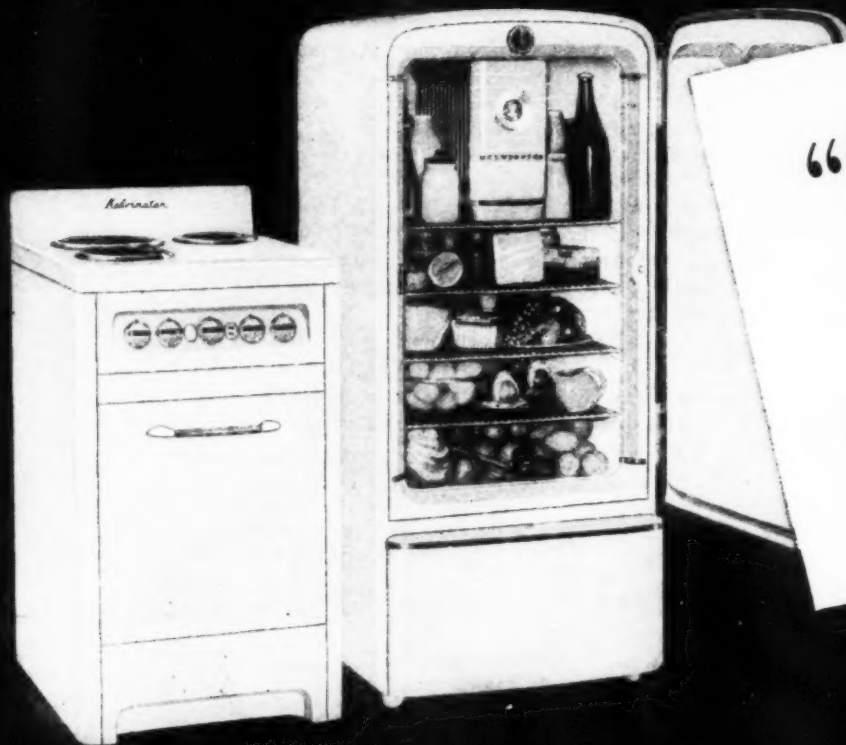
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L D I T O R I A L

Home Building Prices in 1948

IT was not until nearly the middle of 1947 that the last of the paralyzing government restrictions on home building was removed; that manufacturers of building products, freed from price ceilings, were able to begin increasing production; that rising labor wage scales and falling man-hour production appeared to be reaching reasonably predictable levels; and that fear of buyer resistance to mounting building prices was dissipated. The existence of these uncertainties dictated caution in home building operations, with the result that full scale development building was delayed until late spring in the big cities. Unprecedented activity in these cities in the latter half of 1947, combined with increased activity in small towns and rural areas during the entire year, produced a record 860,000 new dwelling units in 1947.

As 1948 opens, uninformed elements again are active in condemning home builders for what are charged to be unjustifiably high prices and disappointing volume. The facts are that all prices are at new high levels, and chiefly because of higher federal taxes, and a government policy of controlled inflation of the dollar; that all prices would be much higher if it were not for increased production and improved production techniques; and that the record of the home building industry with regard to both costs and volume is better than that of most durable goods industries.

Compared with 1940 as a base, the general commodity price index is 187. There are two principal reasons why the index is as high as it is, and one reason why it is not much higher. The two reasons for the advance are inflation of the dollar through government borrowing from banks, and greatly increased taxes to pay the greatly increased cost of government. The one reason why the price rise is not much higher is increased production of manufactured goods.

In 1939 there were 36.7 billion dollars in demand and deposit currency. In 1947 there were 110.2 billion dollars. The ratio is three to one. Because prices rise and fall with the amount of money in circulation, the 1947 commodity price index would be 300 instead of 187, if it were not for the fact that manufactured goods are available in quantities approximately 60 per cent greater than in 1939. Thus, the depreciated buying power of the dollar is in part offset by the increased amount of goods that can be bought.

The cost of government in 1940 took 14 cents in taxes out of every dollar's worth of cost in every manufactured item. Today, the cost of government takes 27 cents out of every dollar's worth of cost. The increased cost of government is 13 cents. Increased production, and improved manufacturing techniques are the only reasons why this additional 13 cents for government cost does not increase the commodity price index from 187 to 200.

Home building prices, however, have risen only to a comparative level of 182.5, which represents a better than average buy in the current commodity market. The reasons are improved land use, improved engineering technique in home design, and greatly improved home building methods. Once the public knows these facts, there should be no buyer resistance to new homes in 1948.

CONSENSUS

Although on the whole, industry leaders agree the outlook for building in 1948 is optimistic, there is a strong undertone of concern on the part of many over what the impact of government policy and Congressional action will be on the entire economy and particularly on the building industry. That inflation is a definite threat to continued progress is not discounted by anyone. At the same time, the possibility that government might go too far in establishing controls on business to combat inflation is causing some pessimism. There is practically universal agreement that home builders will complete about a million new units in 1948, with many predicting that the first half of the coming year will be more active than the latter half. These predictions, of course, are predicated on all segments of the industry being able to operate freely and unhampered by governmental restrictions.

Government

Government housing officials, although predicting favorable prospects for home building in 1948, feel that the real challenge to the industry this year will be its ability to get started on a program of producing homes at progressively lower cost and sustaining a high production level by thus expanding its market.

Finance

Although building costs have increased substantially and building volume is on a high level, financial institutions predict there will be ample mortgage money available to finance all the homes, the building industry can produce in 1948. Along with this promise of adequate funds, however, is a warning that lenders will keep their sights at proper levels in appraising security for financing.

Materials

Expansion of production facilities for many major building materials has enabled manufacturers to turn out the greatest volume in history. In several instances this expansion is still going on, with the only limitation on volume being raw material supplies. The outlook, as expressed by leaders in the building material manufacturing industry, is optimistic for 1948 when it is expected there will be a steadier, more ample flow to builders for the majority of items.

Dealers

Retail building material dealers are universally optimistic about the 1948 outlook, providing government interference with business does not hamstring their activities. The retail industry is also worried about high prices and what possible moves the government may make to combat inflation. Requirements of the Marshall plan will undoubtedly take large quantities of building materials from the industry in this country, in the opinion of retailers. Just where it will do the most injury cannot yet be determined.

Builders

Home builders are looking forward to 1948 with the expectation that it will be the biggest home building year the nation has ever seen. Although demand for types of housing is a regional and local matter, there is surprising uniformity in determination of builders to construct more rental housing and more individual dwellings in the extreme low-cost bracket. Substantial progress in those two categories was made in the latter months of 1947, and the trend will be accelerated. More effort will be made to recruit labor and train mechanics, the lack of which could easily become a major deterrent should materials supply cease to be the limiting factor on volume. Builders, like other segments of the industry, are worried about inflation and are determined to do their part to hold prices down, although the majority of factors forcing prices up are beyond the control of the builder.

What's Ahead for



**RAYMOND M. FOLEY, Administrator,
Housing and Home Finance Agency**

"We have achieved a high rate of home production during 1947. With the momentum of home building we have achieved and the still large backlog of housing demand, the prospects should be favorable for a continuation and steady increase in the level of housing construction in 1948. Particularly noteworthy last year was the great increase of rental housing production.

"The great question that overhangs 1948 home building is that of cost. This is not alone a housing problem. Whatever is done to hold inflationary forces in check will influence to a great extent the course of home building in 1948.

"Assuming reasonable stabilization of prices generally, I think we can expect a leveling off and later the beginning of a gradual decline in home building costs in 1948. I also anticipate increasing attention by the industry during the year to housing at relatively lower prices, and a narrowing of the present serious gap between the cost of housing and the purchasing power of a large proportion of those in urgent need of homes. HHFA will provide every assistance within its authority."



**JOHN C. THOMPSON, President,
Mortgage Bankers Association of America**

"Mortgage lenders, generally, are committed and prepared to finance an expected unprecedented volume of critically needed new home construction in 1948. Unlike the supply of materials and labor, there is no shortage of mortgage money. Builders and mortgage lenders are more conscious of the need for cooperation than ever before, and recognize the fact that the only effective means of eliminating unwarranted federal legislation, which in itself does not produce housing, but may to a great extent socialize the building construction and mortgage financing industry, is to provide housing within the means of veterans and others who need it for either rental or purchase.

"Mortgage lenders will continue to hold their sights at proper heights in appraising the security for mortgage loans and will view realistically costs of construction. They will offer terms to meet sound demands under present and future conditions. However, mortgage lenders will not carelessly make loans or indulge in inflationary lending practices which would result in financial chaos for both borrowers and lenders."



**RALPH M. SMITH, President,
U. S. Savings and Loan League**

"It will take all of the materials and men and a great deal of the mortgage money available to produce between 900,000 and 950,000 new permanent dwelling units in the United States in 1948, but I think there is little question that this record will be reached. A gain of 10 per cent in the physical volume of new residential building over 1947 would give us this very desirable approximation to a million new units a year.

"This will come closer to being a million-a-year rate than the country has ever before achieved. It took us six years after World War I to reach 937,000 units in 1925. We have reached this high productive capacity after the recent war in just about a third of the time.

"The United States Savings and Loan League, in recommending policies to its 3,652 member home financing institutions for 1948, has suggested that the financing of all types of small homes have first claim on association funds, and that no new house be eliminated from consideration for a loan because of size, design, location or type of probable occupant."

Building—Read What the Leaders Say



**ELBERT S. BRIGHAM, President,
National Life Insurance Company**

"During 1947 residential building costs have increased substantially. Despite this, the volume of building has mounted to very high levels.

"It is difficult to understand how construction costs and building activity can continue to move higher together, now that the most urgent need for housing has been satisfied.

"Both the cost and the volume of construction may level off in 1948.

"Perhaps we should consider ourselves fortunate if home building equals the pace set this year, as further cost increases might easily exhaust the capacity of the market to absorb new housing at inflated prices and lead to a situation where builders would encounter losses.

"Nevertheless, because there is a potential market from prospective home buyers who have deferred purchase until costs have turned down, new buyers will tend to come into the market when and if prices decline."



**M. H. BAKER, President,
National Gypsum Association**

"In spite of many difficulties, gypsum production has been continuously increasing during the past two years. The outlook for 1948 is encouraging.

"Board production in 1947 was increased about 25 per cent through plant extensions. New plants at Baltimore, Norfolk and Southern California, now completed, will add another 10 per cent to production for 1948. During the past year considerable capacity was idle because of strikes. Labor now appears to be better stabilized and less down-time can be anticipated, which will result in more production for the coming year.

"There are definite indications that cost will advance from high prices for raw materials and a further advance in labor and freight rates.

"For the year as a whole the trade can expect an increase in production of all gypsum products of from 10 per cent to 15 per cent and from 5 per cent to 10 per cent higher prices."



**MORGAN L. FITCH, Past President,
National Association of Real Estate Boards**

"The outlook for home building has become a question for politicians, rather than the working men of the real estate trade.

"Nationwide, we have only dented the demand for housing that has been released as; (1) an aftermath of war, (2) the creation of new family units, (3) the expansion of population, (4) the migration of population, (5) the public fancy for

home ownership and improved housing accommodations. The only limitations that will curb that demand are excessive costs in relation to ability to pay and exhaustion of available supply of materials and labor.

"The challenge before the industry is that we shall liquidate the barriers to economic production of housing that we have come to know as restrictive practices in labor, archaic building code requirements, price-fixing cartels among producers and distributors, and shortages of basic materials induced by excessive shipment to foreign markets. As we squeeze the water out of construction costs, and bring the price of a better house to lower levels, we reach a broader base of market outlet."



**A. W. OLSON, President,
National Door Manufacturers Association**

"The Ponderosa pine stock woodwork industry produced approximately 20 per cent more doors, windows and frames in 1947 than it did in 1946. That looks like a healthy improvement. But it is still slightly below the average production during the five-year period 1935-1939. The one greatest obstacle to larger production was the scarcity of pine shop lumber, door panel stock and screen wire. As we face 1948, our industry hopefully anticipates a more adequate supply of these materials. If this hope is realized, it is safe to say that production of stock millwork can be increased by 60 per cent to 80 per cent over 1947. Present indications are that the demands from a horde of new buyers of pine lumber, who have been competing with the stock millwork manufacturers for the shop grades, will gradually diminish during 1948. Installation of high speed machines and straight-line production methods in plants recently has greatly increased production capacity. If raw materials are available, the industry can meet any normal demand from the home building market."



**DAVID S. MILLER, President,
The Producers' Council**

"The high rate of home building attained in the second half of 1947 is expected to continue at least through the first half of 1948.

"The Council's economists estimate that about 870,000 new permanent dwelling units will be started in 1948, as compared with 850,000 in 1947. Among factors which will influence the number of housing starts next year, are the trend

of governmental policy with respect to mortgage financing, the length of time for which Title VI loan insurance is extended, the trend of interest rates, and Congressional action on rent control.

"Expiration or liberalization of rent control at the end of February would convert numbers of potential but now undecided home buyers into actual purchasers.

"If the estimate for 1948 is substantially correct, the building industry will have started almost 2,400,000 permanent housing units in the first three years after the war, as compared with only 1,101,000 units started in the three years following World War I, a record of which the industry may well be proud."



**CHARLES E. DEVLIN, Managing Director,
Douglas Fir Plywood Association**

"Although the production of Douglas fir plywood is destined for another increase in 1948, an overall short supply of the panel material is indicated so long as building remains at or near the current high plateau.

"During 1947, output was bolstered by upwards of 15 per cent, and the volume of fir plywood is expected to increase as much as another 10 per cent in 1948. Maximum production of panels remains the prime objective of fir plywood manufacturers. However, quality of product continues to take precedence in all fir panel factories. Exemplifying the determination of the industry in this connection is establishment, late in 1948, of the new commercial standard CS45-47 which sets more rigid specifications for all fir plywood identified by industry-grade trademarks.

"Important to builders and lumber dealers is the fact that the major volume of fir plywood is and will continue to be directed into construction channels, principally for use in the home building industry."



WILLIAM G. WHITMAN, President,
National Oak Flooring Manufacturers Assn.

"Unless there is a decided and unexpected change in the factors governing production, the present trend toward greater availability of hardwood flooring should be accelerated during 1948. The industry, in fact, is looking forward to its greatest annual output in history.

"This is not to say that oak and other hardwood flooring will be plentiful. But the gap between supply and demand, narrowed by the record production of 1947, will be further contracted, if not closed entirely. Within the industry, opinion seems almost unanimous that, before the end of 1948, sufficient hardwood flooring will be available to meet demand occasioned by all residential building. Dealers, incidentally, expect such demand to remain at a high level. If 1948 brings good weather, labor and economic conditions, output will be even greater than it was in 1947."



RADFORD R. CRANE, Chairman,
Enameled Cast Iron Plumbing Fixtures Assn.

"For 1948, we anticipate increased production, with no letup in demand. We expect that plumbing fixtures will still be hard to get, though production will be at an all-time high. Lack of raw materials such as pig iron and coke, still may upset plans for maximum utilization of expanded production facilities, and it is impossible to estimate fully the impact of the Marshall plan on our domestic economy.

"All indications are that the construction industry will hit a new high in 1948, and while we do not believe supply will catch up with demand during the year, we are sure there will be enough plumbing fixtures to take care of all new construction. Of course, we must realize that any predictions for the coming year are bound to be indefinite with so many disturbing economic and political factors in the world today."



E. W. RUDDICK, General Manager,
Ponderosa Pine Woodwork Association

"This industry will be making every effort to increase production during the coming year. Since output of pine millwork generally is dependent on the availability of shop grade lumber, a great deal depends upon the lumber manufacturer having favorable logging and production conditions. There may be some decrease in the use of shop pine lumber by non-millwork manufacturers, which should make an increased supply available for this industry's needs.

"A major contribution of this industry to the builder and prospective new home owner will be production of doors and windows in modular standard sizes.

"Since such installation means economy through minimizing cutting and fitting on the job site, there should be an increasing trend toward use of this design standard."



R. A. COLGAN, Jr., Executive Vice President,
National Lumber Manufacturers Association

"America's builders will have adequate supplies of construction lumber in 1948. Once the slow strangulation of our industry by the grip of government regulation was halted, production began to climb and the industry is now producing at top speed. The outlook for the year ahead is good. We expect to equal or better our 1947 output, which was adequate in most grades and sizes to meet the tremendous demand for construction lumber.

"Despite record-breaking output, supply was still not able to match the backlog of demand for hardwood flooring and millwork, but with production going ahead at a greatly accelerated rate, it is hoped that supply and demand will be in balance in the near future. America's forests are in excellent condition, and with continuing good care, there is adequate standing timber to supply all of our foreseeable needs for all time."



ERNEST T. TRIGG, Chairman, Exec. Committee,
Nat'l Paint, Varnish and Lacquer Assn., Inc.

"There is sound basis for optimism regarding the supply of paint, varnish and lacquer products in 1948. In view of the joint prediction by the U.S. Department of Commerce and the U.S. Department of Labor of a total volume of construction of \$15,200,000,000 in 1948—20 per cent above 1947—plus the many products of American industry that require finishes made by this industry, it seems certain that only a major economic upset, which is not at present anticipated, could prevent the sales of the paint industry from substantially exceeding the 1947 record, which was in excess of a billion dollars.

"The supply of raw materials, while tight in spots, is progressively easing, and it seems reasonably probable on the whole, adequate materials will be available in 1948 to meet the needs of the paint industry."



W. T. TURNER, President,
National-American Wholesale Lumber Assn.

"In my opinion, the 1948 lumber supply should be sufficient for all essential construction needs, although scarcity in the higher grades may continue well into the year. With possible slight decreases in certain grades, the average price of lumber should continue firm because of high stumpage costs regardless of species, high labor costs, and a great need for experienced labor.

A most disturbing factor contributing to unsettled conditions is the continued bidding for mill inventories between long established wholesalers and newly organized and inexperienced buying outfits. Hasten the day when the lumber industry returns to traditional practices of firm negotiations.

"By this I mean: Firm quotations; firm delivery commitments; firm orders; and firm acceptances. In other words, a return to the days when a contract was a contract."



W. C. JOHNSON, President,
National Electrical Manufacturers Association

"With availability of adequate supplies of virtually all electrical items that enter into construction, the electrical manufacturing industry can give every assurance to the entire building industry that it will be unhampered, electrically speaking, throughout the active building period in 1948.

"Factors in determining the market are: (1) for every thousand dollars in general building contracts for residential occupancies, there is less money expended for electrical wiring than for the same amount in general contracts for industrial and commercial occupancies, 2) for each type of occupancy, electrical needs are about the same from year to year, 3) demand for electrical wiring materials follows the trend of the building industry, 4) indications are that the volume of building in 1948 will surpass that of 1947 in all types of occupancies."



STUART H. RALPH, President,
Asbestos Cement Products Association

"While the production of asbestos cement building products reached record proportions in 1947, the year ended with little change in the relation between supply and demand. It is expected that the manufacture of asbestos shingles, siding, building board and corrugated sheets will be continued at the same high rate in 1948.

Because of the asbestos fibre situation, however, no major increase in output is likely. Asbestos fibre, an irreplaceable ingredient in these materials, has been in short supply for many months and probably will continue so. The outlook for the asbestos cement products industry, however, aside from the fibre shortage, is very optimistic. Barring unforeseeable developments, both the output and the use of asbestos cement products should continue at or near the all-time peak reached in 1947 throughout the coming year."



NORMAN P. MASON, President,
National Retail Lumber Dealers Association

"We can have an excellent year for house building in 1948 with well over a million new units completed—or not. The results will depend on how well we in the industry can sell the government on permitting us to do the job. The cost of home building today is in line with or below the general level of other costs in our economy.

Dangers are: Public housing legislation; materials supply; controls and allocations; mortgage loaning policies and political propaganda. This is an election year. Politicians, eager to draw attention from other ills can, by destroying public confidence in the private housing industry, make it difficult for it to do the job expected of it. What happens in home building in 1948—whether we do the job America wants us to do, and build over a million new homes, or not—depends upon how well we are permitted to perform."



C. B. SWEET, Vice President,
National Retail Lumber Dealers Association

"The three important factors in the home building outlook for 1948 are production, supply and politics. If any one of the three goes wrong, the industry will suffer. Production at present is at a very high rate and must remain so. Supply must bring to the user through normal channels the large production manufacturers are claiming. The "gray" market, which may be slightly cleaner

than the black market, is still a plague to the retailer, and should be hung on the line of competition for a good bleaching. Politics, the Congress to be more exact, may try to satisfy certain segments of the voting public with new regulations and restrictions which will tend to curb the producers and the suppliers.

"If there is harmony among the three factors mentioned, production, supply and politics—then the year 1948 will be most prosperous for everyone."



JAMES V. JONES, President,
The Insulation Board Institute

"During the year just passed, the insulating board industry shipped more of its products to dealers than ever before in its 34-year history. Shipments topped those of 1946 by approximately 20 per cent. The outlook is for a further gain of at least 15 per cent in 1948. All forecasts, of course, must be predicated upon a continuation of favorable conditions. Since the end of the war,

members of the industry have been engaged in expansion programs of various sizes and scopes. Some were completed in 1947, others will not be effective until some time this year. As they get into operation, shipments will continue upward. Although the increased production in 1947 did not fully meet demand for these products, the industry is proud of its record because it represents an accomplishment made possible only through maximum utilization of production facilities."



WARD D. BRIGGS, President,
Northwestern Lumbermen's Association

"The year 1948, in my opinion, will break all known records in the construction of farm and rural buildings. The potential farm market is tremendous. The farmer wants and needs a better home—a modern home. The rural electrification program has built up a huge backlog of remodeling as well as new construction on farms. Many homes will be remodeled to include a new bathroom as well as a new kitchen. And farmers have the money to pay for these refinements. Their future is bright. Farm products are returning a very good margin of profit and will continue to do so for at least five more years. Farmers have cash reserves in addition to good investments in United States Bonds. If the materials are available, and if dealers and builders are equipped to handle the volume, there will be a tremendous farm building program in 1948."



HARRY B. HIGGINS, President,
Pittsburgh Plate Glass Company

"Production of plate and window glass during 1947 was the highest ever experienced by the industry. This was due largely to freedom from work stoppages, more efficient scheduling of operations resulting from increased availability of raw materials and addition of production and processing facilities.

"Although both plate and window glass will probably remain on allocation during 1948, domestic production should meet the needs of the building industry. This is particularly true, if the favorable production factors of 1947 are maintained. The outlook for an increase in availability of processed products such as mirrors and double-glazed Twindow insulating units is equally favorable. It is expected that the production of glass of all types of building will keep pace with the expected pace of construction in 1948."



WINFIELD OLDHAM, President,
Lumbermen's Association of Texas

"In 1948 there will be as much as 10 per cent more homes started and completed than in 1947. My reasons for making this statement are: There is still a high demand for housing all over the country. We have built up a great momentum in home construction since government controls were removed June 30, and I believe the rate attained during the last half of 1947 will be maintained during the entire year of 1948. The one big factor that may cause home building to fall off next year is the high cost. However, the cost of a house is not as high as the public has been led to believe, when compared with other commodities, such as food, clothing, automobiles, etc. Also, a house is not too high in price in comparison to the average man's income, which is up in proportion. There are other factors that could retard home building, but I am discounting them."



FRANK R. HAWKINS, Advertising Manager,
Libbey-Owens-Ford Glass Company

"The outlook for delivery of Thermopane insulating glass in 1948 is greatly improved. By expanding production facilities and developing new techniques, a demand that has increased 800 per cent since 1945 has been met. The back order file at the factory is now on a 45-day basis, and stocks of standard size Thermopane have been shipped to glass distributors all over the

United States. As a result, orders for standard sizes can, in most cases, be filled immediately, and orders for any size can be filled in 45 days—ample time to satisfy most building requirements. Although delivery on double-glazed insulating glass units has been very slow for two years, the improved situation as pointed out should make these units available on short notice to home builders in 1948, despite the fact predictions indicate an even greater demand than 1947."



J. HAMMOND GEIS, Retailer,
John H. Geis & Co., Baltimore, Md.

"Generally speaking 1948 should be a good home building year. Supporting this is the pentup demand based upon both real and imaginary need, for new homes and maintenance of existing structures. This in turn is backed up by the greatest employment in the nation's history plus a credit structure which makes it easy to buy or build. In addition, people have become fairly hardened to high prices and high costs. Further, the industry is geared up mentally and physically to build over a million homes in the next 12 months.

"Offsetting all this are the vagaries of an election year, the political football which housing has become, the hue and cry of public housers and social planners, the requirements of the Marshall plan and last but not least, the acute shortages in certain lines such as nails, bathroom fixtures and some millwork items."



EDWARD R. CARR, President,
National Association of Home Builders

"The outlook for sustaining the record production of homes reached in the latter months of 1947, after relinquishment of controls, is encouraging in most aspects for next year. We believe we can maintain that volume, provided, of course, the Marshall plan does not take too much essential building material. Home builders have demonstrated their good faith not only by their record production, but by building a high percentage of rental housing under Title VI funds.

"We have exceeded even our former good record of low-cost housing construction. Official figures of FHA on low-cost housing sustain this contention. From January through October, 1947, the average FHA loan was only \$6,941. This is indication enough that homebuilders are in the low-cost field—not here and there—but on a nationwide basis."



LUTHER J. BOGGS, Secretary,
National Association of Home Builders

"The year 1948 will be a good home building year. I cannot see any prospects of lower prices to the home purchaser since all factors which have determining control over construction costs indicate a continuance at present price levels. On the other hand, it is my firm conviction that home builders will accelerate their present activity in the low-cost housing field. This acceleration will not be brought about, however, by lower wages in the building trades nor a drop in material prices, but by especially designed dwelling units and the elimination of many elaborate and expensive local building codes. It is my considered opinion that should government controls be again imposed on the building industry, such a step would reactivate the worst black market conditions ever experienced. Private enterprise has the capacity and initiative to satisfy the nation's housing needs."



M. J. BROCK, Home Builder,
Los Angeles, Calif.

"America's third postwar year—1948—is a year that holds great promise for the construction industry. Free from restrictions and controls, and with every indication that material supplies will be available in reasonable quantity, the industry must now turn its attention to making the houses it produces accessible to the public. "Power to buy" will be the yardstick by which the housing production of 1948 will be measured. Careful analysis is certain to reveal that a major portion of the huge unsatisfied demand for housing is a reflection of the needs of lower income families—a need that can only be met if the construction industry will accept the challenge to bend its effort to the task of devising ways and means to build good houses that will sell for 25 per cent less than those that comprised the 'popular' average of 1947."



R. P. GERHOLZ, Home Builder,
Flint, Mich.

"Home building will reach an all-time high in 1948 with new starts in excess of a million units. In spite of the extremely high costs of most materials, which should come down, and continuing shortages of both materials and labor, it looks as though we can go through 1948 in high gear. Building costs have about reached their peak, and have every indication of remaining at this level for some time.

"Quality will continue to improve. Further increases in wages will be offset by increased productivity on the job. Costly delays in the field, due to shortages of materials and labor, will be substantially reduced in 1948. Mortgage money prices will continue to firm up, and in most areas, lenders will become more selective. There will be ample funds available, however, to do the biggest housing job in history."



JOSEPH MEYERHOFF, Home Builder,
Baltimore, Md.

"There is still a large unsatisfied demand for housing with substantial ability to pay for it at today's costs. The coming year, however, will be one of shortages—uneven flow of materials, shortages of all types of labor. Uncertainties as to financing methods and terms will add to the difficulties of producing and selling housing accommodations. During 1948, in my judgment, home builders must exercise an unusual degree of sound business judgment and extreme caution. Selection of good location, proper type of house to be built for the market, extreme care in design, accommodations and specifications of the homes to be built will be more important than ever.

"In addition, many factors causing serious economic distortions beyond control of the home builders, make 1948 a year that will be a real challenge to the industry."



NATHAN MANILOW, President,
Chicago Metropolitan Home Builders Assn.

"The coming year will produce all the homes that private builders can produce—at least a million of them. Provided: (1) that mortgage money is not made unavailable nor too costly by government inspired fright, (2) that labor is not made unavailable nor too costly by increases in hourly rates not matched by increased production, (3) that materials are not made unavailable nor too costly by government dictated maldistribution or lack of transportation. Among its many accomplishments FHA has raised building standards. Everyone congratulates them for this job so well done. But now we are in an emergency and relaxation is necessary. Building codes have tightened up. Labor has followed suit. Some relaxation is needed on all fronts to make the most homes available in the price class that most home seekers can pay."



W. P. ATKINSON, Home Builder,
Oklahoma City, Okla.

"It is my studied opinion that with favorable financing, material supplies and labor conditions, there will be more living units completed in the Southwest in 1948 than in 1947 by approximately 15 to 20 per cent. I also feel there will be a sufficient amount of labor available for such an increase. The amount of material available depends on the demand for materials in all other areas. One of the most serious problems facing us is the question of adequate construction financing. If authorization under Title VI is not extended past March 30, 1948, the home building program will be seriously curtailed due to lack of construction financing.

"This is the only type loan under which builders can operate on large projects with any degree of security. This is the one item most likely to curtail home building in 1948."



AUSTIN DREWRY, President,
Prefabricated Home Manufacturers' Institute

"The manufactured home industry will continue its steady growth in 1948. Basically sound in conception, geared to meet unprecedented demand, the industry is destined to take its place with the great mass production industries of America. Viewing in retrospect the domestic and international disruptions which so greatly affected our national economy in the past year, we adopt a conservative optimism with respect to the prospects for 1948. The years of research, of development of pattern of organization and operations, of training skilled personnel, of facing and solving one problem after another and of striving for recognition, are behind us. These years, familiar to every new industry, have conditioned our industry for the job ahead. We have consolidated our gains and are a well-seasoned industry capable of making our full contribution in the year ahead."

TRENDS

Building Tempo to Reach New High in 1948

SINCE the housing shortage is still the Nation's No. 1 domestic problem, the public has watched, with interest, the statistics on residential starts as reported by newspapers and radio. Early in 1947 the prediction was made by the Bureau of Labor Statistics that 1,000,000 new non-farm dwellings would be started. In the spring, serious talk of a buyers' strike, the sheer inability of people to buy new homes at prices in excess of prewar, and the fact that reports in March, 1947, showed that starts were less than the previous year, caused BLS to revise its estimate downward to 750,000 units. Other well-informed analysts of the industry made estimates as low as 625,000.

This was the signal for the building industry's numerous and influential critics to launch a drive against the industry and to reiterate the hackneyed charges of inefficiency, unnecessarily complicated methods of distribution and extortionate profits. In

spite of the flood of propaganda in newspapers and consumer magazines about the "High Cost of Building," builders kept on building houses and the public kept on buying them. In June, the number of starts was 17 per cent above 1946; July starts were up 28 per cent. August was up 27 per cent, September up 53 per cent, with October up 64 per cent. Much to the dismay of our critics, 1947 will go down in the records as the second best year in building history with at least 850,000 starts of new permanent non-farm dwellings. The official BLS estimate for 1948 is 950,000 dwelling units, which is in excess of the record year of 1925. This is a remarkable achievement, considering that the supply of building materials at the war's end was low and that building labor had been dispersed during a twenty year period of relative inactivity.

\$15.2 Billion Forecast for 1948

In terms of dollars, the forecast for

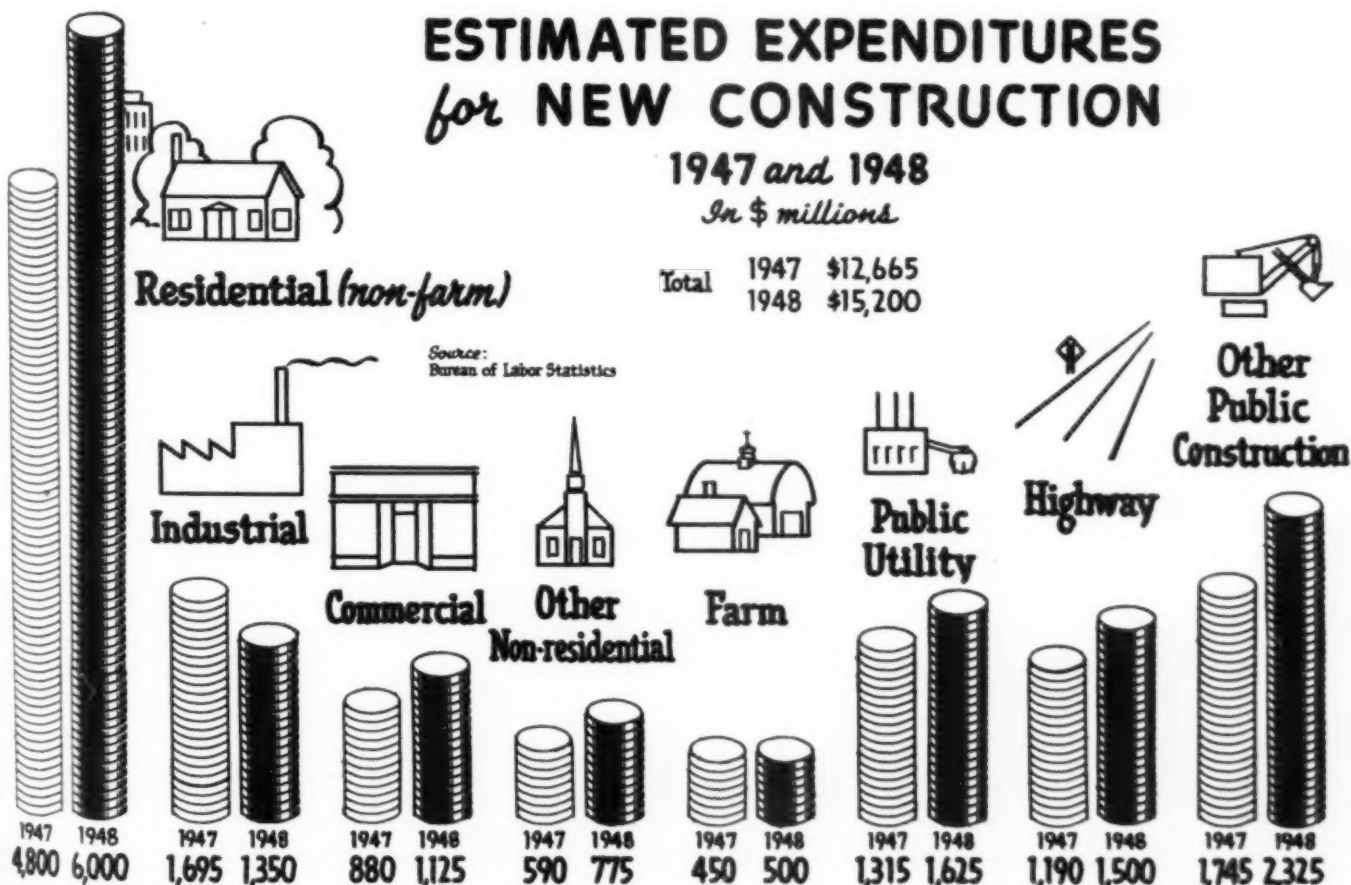
residential construction in 1948 is \$6 billion, up 25 per cent over 1947; industrial construction \$1.7 billion, down 20 per cent; commercial construction, \$1.1 billion, up 28 per cent; public utility construction \$1.6 billion, up 24 per cent. Public building including \$1.5 billion of highway construction is expected to rise 30 per cent to \$3.8 billion. Overall, the total for new construction in the United States is forecast at \$15.2 billion in 1948, an increase of 20 per cent over last year.

It means big business for builders large and small, including, as it does, an estimated 950,000 new housing units, a record volume of new warehouses, offices, loft buildings, stores, restaurants, and garages, thousands of new farm buildings and a large expansion of public utility enterprises. Only one category of private building, industrial building, is expected to show a decrease. Although public building is expected to show a 30 per

ESTIMATED EXPENDITURES for NEW CONSTRUCTION

1947 and 1948

In \$ millions



cent increase, public residential building will decrease from \$175 million in 1947 to \$100 million in 1948. Big as all these figures are, the total for all construction, private and public, in 1948, will amount to less than half the Federal Government's budget of \$37.5 billion.

How Long Will It Last?

The public has quickly forgotten the shortage of tires, white shirts, and nylon stockings, the principal topics of conversation as late as last spring. Just as surely, the housing shortage will be a subject for reminiscence one day. Most present day builders have a vivid remembrance of the long lean years of the thirties when vacant houses and apartments lingered on the market. Just as vivid to many are the booming years of the twenties, although they were thought of then as "business as usual", rather than boom years. As early as 1926, builders saw the beginning of economic depression, regretfully began to lay off their construction labor and took severe financial losses. By 1933, new building was 10 per cent of its 1925 peak and a slow fumbling recovering began to take place. By 1941 enough demand had been generated to assure a volume comparable to the best years of the twenties. Then war construction engaged the attention of builders. At the war's end, builders met a rav-

AVERAGE CONSTRUCTION COST OF NEW FAMILY DWELLING UNITS AUGUST 1947—1946					
(Based on contractor's estimates. Represents costs of labor and materials, and all sub-contractor's work—Excludes land, and development costs.)					
Selected Industrial Areas	1947	1946	Other Selected Communities	1947	1946
Cleveland	\$9,200	\$7,700	Lancaster, Pa.	\$7,900	\$7,100
Washington, D.C.	9,000	7,900	Miami, Fla.	7,700	6,700
New York-Newark- Jersey City	8,500	7,000	Enid, Okla.	6,000	3,500
Chicago	8,500	7,700	Lansing, Mich.	5,900	5,300
Detroit	8,100	6,900	Ft. Dodge, Iowa	5,700	5,500
Pittsburgh	7,500	6,800	Phoenix, Ariz.	5,200	7,100
San Francisco	7,500	6,700	Marion, Ohio	4,700	3,100
Los Angeles	7,200	6,900	Billingham, Wash.	4,000	4,700
Philadelphia-Camden ..	6,600	6,800	Mobile, Ala.	3,800	2,700
Ft. Worth	5,500	3,200	Newton, N.J.	2,700	3,600

Source: Bureau of Labor Statistics

enous house-hungry public demand.

The shortage, on a national basis now, estimated at 2,500,000 units will not end all over the United States at the same time. Instead, based on population growth since the housing supply was normal, and the rate of construction during the shortage, various localities will find themselves with a surplus of new dwelling units hanging over the market, and the shortage will begin to be a thing of the past.

Local Market Research

Builders must begin to be their own housing market research experts in their particular communities. The national forecasts do not apply universally. National statistics show that from 1900 to 1910, non-farm dwelling

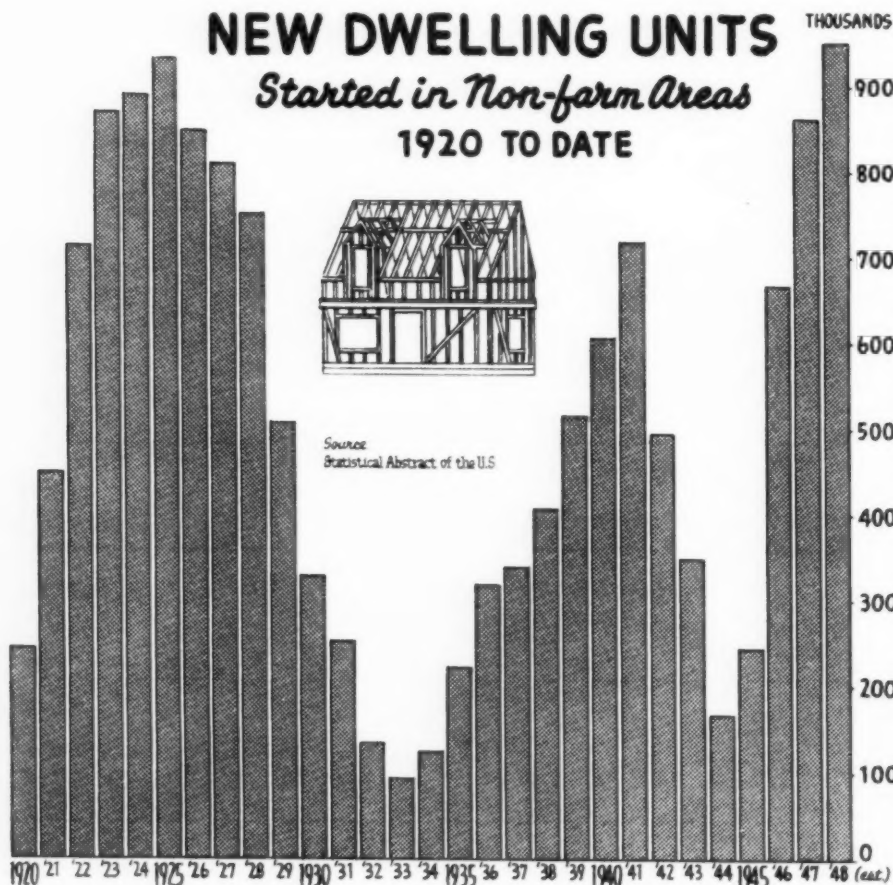
units were built in a number commensurate with the net increase in number of families; from 1911 to 1920, the rate of homebuilding was slightly less than the increase in number of families, resulting in a shortage at the end of World War I; in the 1920's, home building greatly exceeded the family increase. By 1929, vacancies were prevalent in most areas, and increased further with the doubling-up of families during the depression. Increase in family formation throughout the thirties absorbed most of the vacancies so that during World War II a shortage began to be apparent and reached the acute stage with the return of servicemen and the increase in the number of marriages, which have broken all records during the last two years. The high marriage rate is not expected to continue during the 1950's, when the children of the depression (when birth rates were relatively low) will come of age. It is estimated that there will be an increase in family formation during the 1950's of only 387,500 families a year.

Experience gained during the acute shortage stage will be useful to builders in promoting business when the shortage begins to disappear. It is expected that the public will be home-conscious for many years, their appetites whetted by several years of shortage. The current offerings of builders displayed each month in the pages of *American Builder* represent substantial improvements over pre-war standards, and will be an inducement to abandon the archaic structures of the last century, which represent a large proportion of the dwelling units of most towns and cities. Population increase, the number of new homes constructed and the obsolescent market are the factors which must be kept in mind in appraising the needs of a community.

Housing Needs of Wichita

Wichita, Kansas, now a city of 160,000, as a result of a big war-boom,

NEW DWELLING UNITS Started in Non-farm Areas 1920 TO DATE



has held most of its influx of war workers, and has had a very substantial residential building volume. This was shown by a survey completed in December by 850 volunteers under the direction of the city planning commission and the Federal Public Housing Authority.

One of the principal reasons for the survey was the demand by the FPHA for a disposal program for the three war-time temporary Federal housing projects in Wichita which comprise 4,343 units and are now filled to capacity.

The tenants comprise a considerable part of 7,700 families in Wichita who, the survey showed, would like to find new homes. Most of them will not pay more than 250 per cent of their annual incomes for them. Some 2,870 families want to buy houses costing less than \$5,000, which represents a problem for Wichita builders—how to build houses under \$5,000. The price of houses has gone up 82.9 per cent in Wichita since 1940, the survey showed, with a 1947 median price of \$6,847 against \$3,744 seven years ago.

Typical of the problems in communities with a large number of temporary dwelling units is the fact that the city of Wichita is, at present, fighting a federal proposal to sell 1,118 temporary war-built units to a corporation made up of residents, on the ground that they should be retained as rentals for veterans.

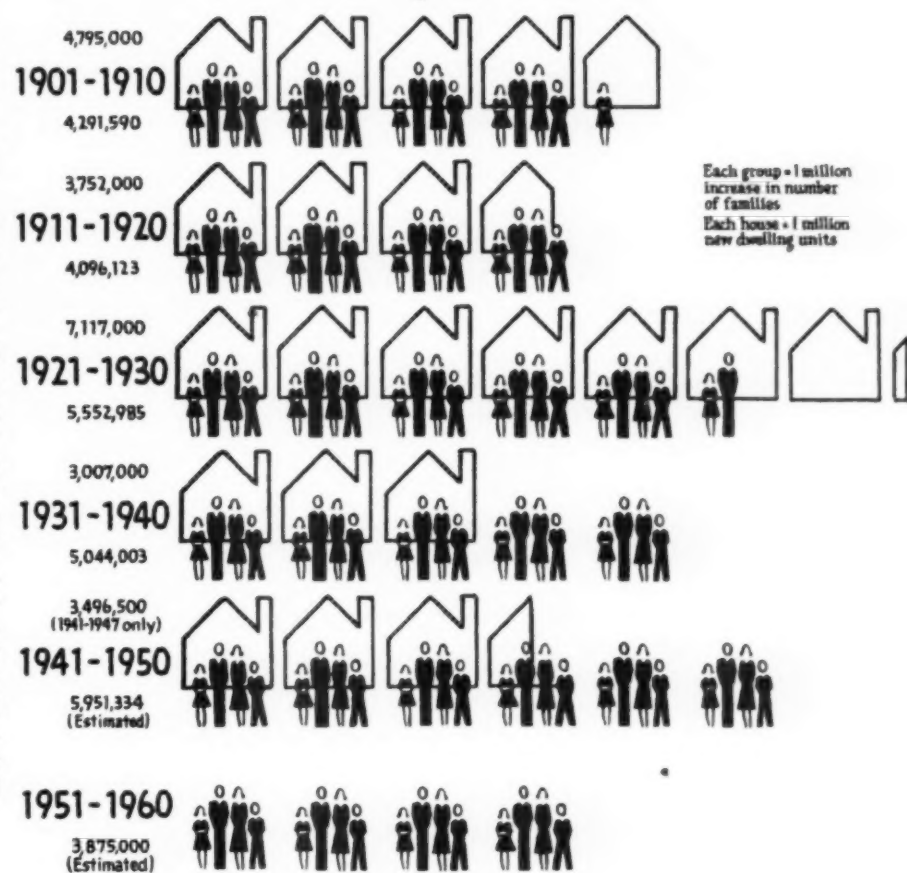
Equipment in 1948 Houses

A survey made by *American Builder* among subscribers last month shows that although some builders expect to build fewer dwelling units in 1948 than in 1947, most plan to build more; the 200 surveyed expect to build 5,001 dwelling units in 1948, as compared with 3,435 in 1947. This gives credence to the prediction that approximately 1,000,000 new dwelling units will be started in the United States this year.

The survey of 200 *American Builder* readers turned up ten who expect to build 100 or more dwelling units in 1948. The average of these subscribers, however, expect to build 25 units. The price of comparable dwelling units, according to the survey will be about the same in 1948 as in 1947, but fewer units are expected to be built in the \$11,000 to \$15,000 price bracket, and more in the \$10,000 to \$11,000 bracket, including land and equipment. About one out of five of the new dwelling units will be apartments.

The survey shows that the new homes are marvels of efficiency and comfort because of the use of equipment and appliances, and not because of larger size or revolutionary design.

INCREASE in Number of U.S. FAMILIES and Number of DWELLING UNITS Started in Non-farm Areas



Sources: Bureau of Census; Bureau of Labor Statistics

Builders now supply increasing quantities of equipment and appliance items not usually included in the sale price of new homes which they built prior to the war. According to the survey, 81 per cent of kitchens will have built-in kitchen cabinets; 51 per cent will have new gas or electric ranges; 33 per cent, new gas or electric refrigerators; 94 per cent, new gas, electric, or oil hot water heaters; 17 per cent will have new automatic dishwashers; 9 per cent, garbage disposal units; and 46 per cent, kitchen ventilating fans. In the laundry, builders will provide automatic washers in 15 per cent of new homes, dryers in 4 per cent, ironers in 3 per cent, built-in ironing boards in 22 per cent and clothes chutes in 12 per cent.

Door chimes will signal the entrance of the visitor in 84 per cent of the new 1948 homes. Forty-two per cent of the new homes will have mail chutes, 33 per cent, complete clothes closet equipment, and 57 per cent, venetian blinds.

Builders will represent big markets to manufacturers in 1948. In

some cases, they are taking a large percentage of the manufacturers' production of items which have not previously been sold through builders.

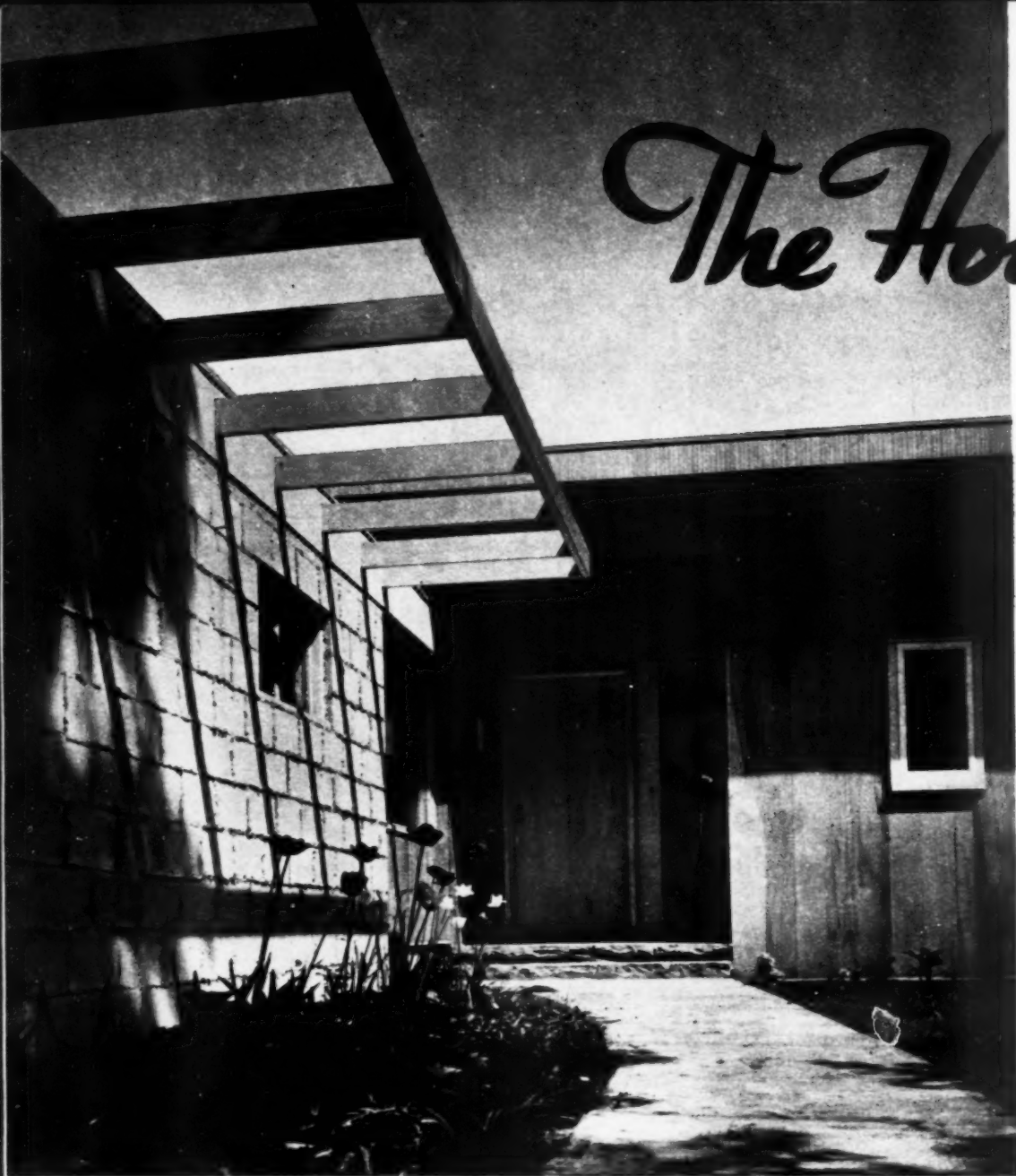
The Supply of Material

The big increase in building in the last half of last year caused a serious strain on the supply of materials, when it was hoped that the supply situation would be easing. It is expected that the supply of most building materials will improve substantially in 1948, although steel and steel products can be expected to remain scarce. The degree of material shortages this year also will partly depend upon ultimate decisions in respect to foreign aid. Freight car shortages will also be a factor.

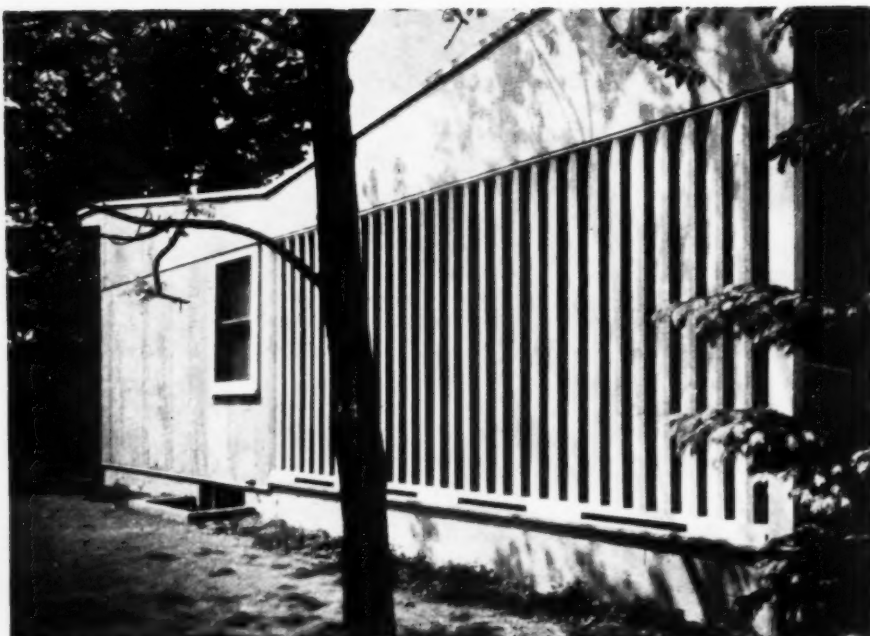
Lumber, millwork and hardwood flooring probably will be in sufficient supply this year. Plants and production facilities for gypsum board, plywood, and other building materials were expanded last year, assuring a better supply.

The list of scarce products will be
(Continued to page 106)

The House a



Main entrance to house is recessed between garage wall and extension of the master bedroom. Large window to the left of door is in dining area of kitchen. Arbor at top of garage wall is formed by extension of roof rafters. Below and at left is a partial view of east wall of house. The vertical 2x6 members placed at an angular position to the wall surface form a vision screen for the exposed wall of the porch.



SO much has been said about the postwar house with its new concept of planning, design, and features, that the building public has come to expect the unusual in the homes that are being offered.

Evidence of this change in thinking by both builder and owner has been manifested by the increasing number of houses that are being built, embodying these principles.

Following this trend, Parents Magazine conducted a national survey in which the aim was to determine: "What Kind of Homes Do Families with Children Want". The survey indicated a movement away from style and tradition, with emphasis on the function and workability of a house. Over 90 questions were asked of each of the 13,766 persons who received questionnaires, covering every conceivable idea in regard to a home. Replies from 3,653 were received.

Survey Built

Parents Magazine surveyed families with children, who were planning new houses, to determine the kind of home they wanted. As a result, a house was designed and built on basis of the survey findings

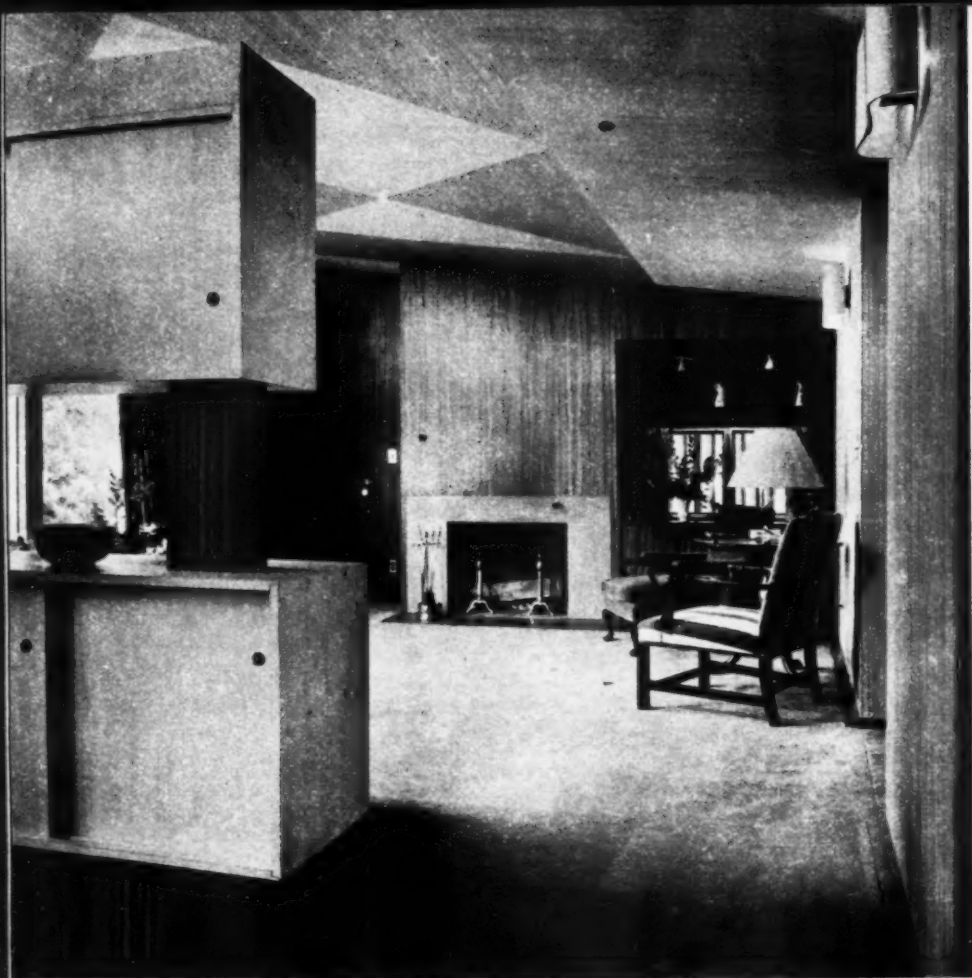


ABOVE: Partial view of rear of house. Clerestory windows on this wall give an additional amount of desirable natural interior lighting. At left is shown the west wall, with service entrance leading into utility room and kitchen at left of garage. Two-car garage has lots of storage space, and is accessible from street. Inverted roof line shown below, offers a number of advantages, such as opening up the rooms to the exterior and giving them a studio effect

The plans of the original house, prepared by Ketchum, Gina and Sharp, architects, are a composite design based upon the replies to the survey questionnaire. It has been designated as a way of living. The plan was developed from the inside out, and spaces or areas were considered from the viewpoint of family relationships and living requirements, rather than in terms of rooms.

An interesting adaptation of the original design is the house shown on these pages, built for the Lloyd L. Millers in the Province of Ontario, Canada. Plans for this house were prepared by Russell R. Kilburn, designer. The house has been well adapted to the Millers' site which fronts to the south, thereby placing the living rooms to the north and away from the street. Because of this exposure, it seemed desirable to make some changes in the original fenestra-





LEFT: View of living room, looking from dining area toward fireplace and door to covered porch. End walls are covered with oriental walnut veneer. Cabinet creating a division between living room and dining area is in foreground. Note individual posts supporting the several divisions of cabinet; each covered with striated Weldtex and finished in a contrasting color. **Below:** North wall of living room. A bank of fixed clerestory windows floods the large room, which faces north, with an abundance of natural light. All windows on this wall are glazed with double glass insulating units. Various types of plywood are used on the different walls of living room. Weldtex is arranged in a checkered pattern on the sloping ceiling that follows the contour of the roof



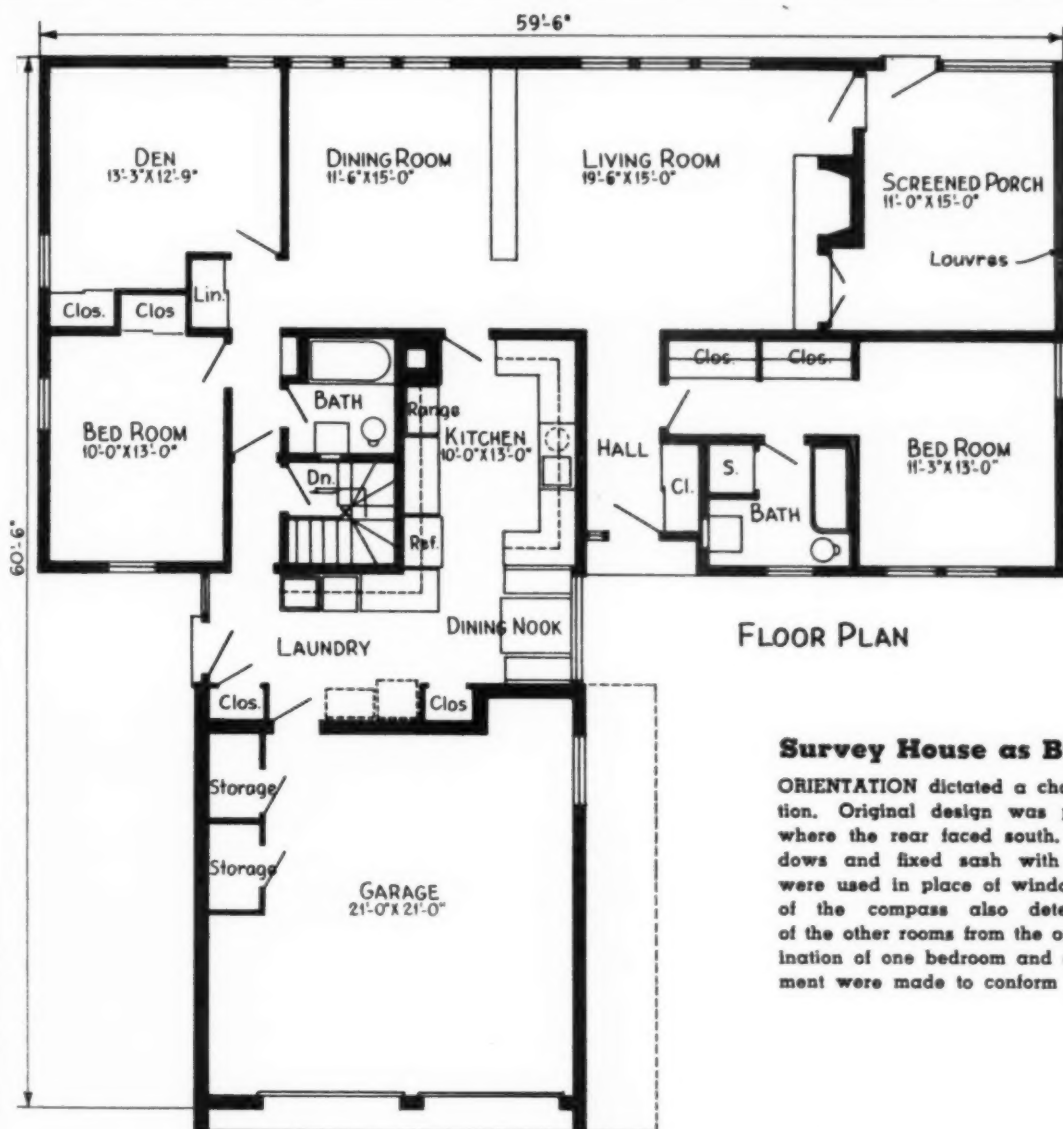
TWO views of combination kitchen-laundry at left. **Below:** View from dining area. Clerestory windows over garage give natural light to work surfaces in kitchen



tion as well as the position of some of the rooms.

It is interesting to note that this house featuring the inverted or inward sloping roof, was built in a comparatively small Canadian community, which, up to the time the house was started, was unfamiliar with this type of architecture.

The house was built by young, local men who had little experience with the construction of homes of modern design but who, once they became familiar with the advantages of such construction, set to building this house with an enthusiasm. Since the completion of this house, a number of more modernly conceived houses have been started in the same community.



FLOOR PLAN

Survey House as Built

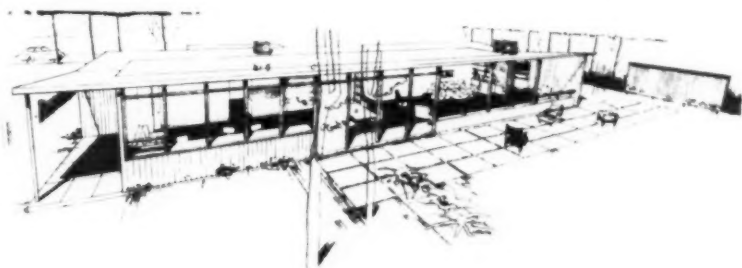
ORIENTATION dictated a change in fenestration. Original design was planned for site where the rear faced south. Clerestory windows and fixed sash with double glazing were used in place of window walls. Points of the compass also determined position of the other rooms from the original. The elimination of one bedroom and addition of basement were made to conform to owner's need

Survey House as Planned

ORIGINAL plan and design of expandable house, number one, of the Parents Magazine, are at right and below. The design was followed in its general basic pattern by the owner of the house built to conform with the survey but including his own special needs and requirements



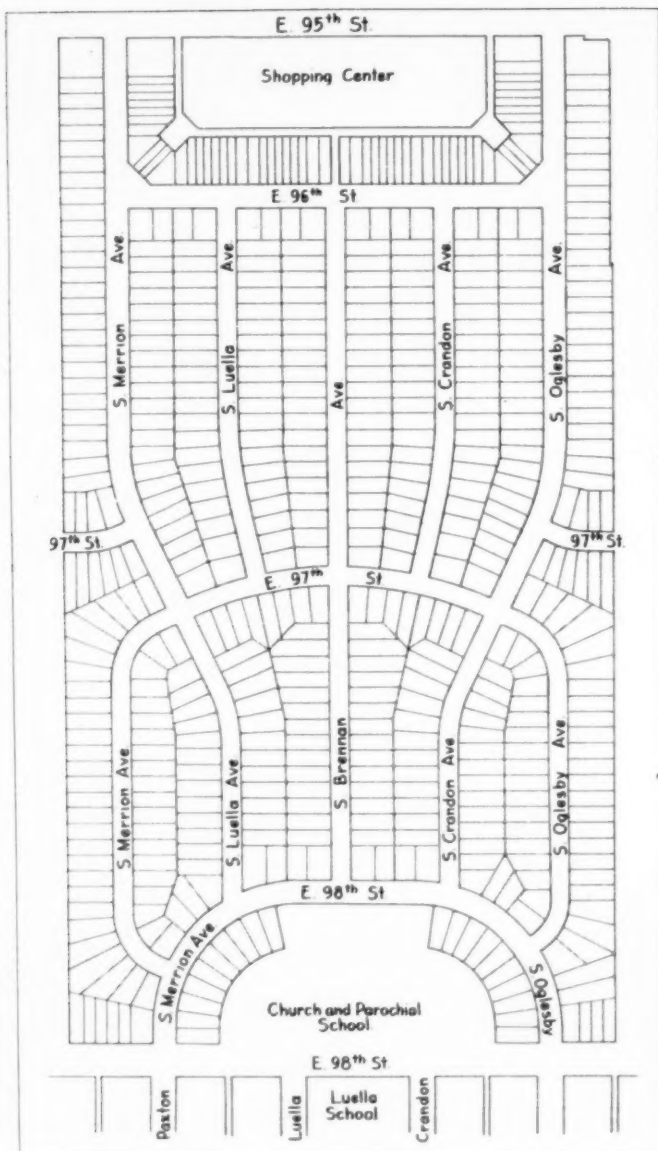
FLOOR PLAN



Photographs by Richard Garrison, New York City



J. E. MERRION, developer of Merrionette Manor, with Mayor Kennelley of Chicago and E. J. Kelly, Chicago FHA director, who, with other prominent city officials and builders, participated in formal dedication ceremonies on Nov. 14. Plat of subdivision is below



MERRIONETTE



THE PROBLEM of how to develop a desirable community of two-bedroom dwelling units in the high-cost Chicago area and keep the sales price under \$10,000 in the current market served as a challenge to J. E. Merrion and his organization. After considerable study and extensive travel to view housing units priced under \$10,000 in various parts of the nation, Mr. Merrion developed the idea of constructing a community of duplex ranch houses, compactly planned, attractively designed and well constructed.

Work is now well under way on 542 units in Merrionette Manor between Ninety-fifth and Ninety-ninth streets on Chicago's extreme south side. The plat is laid out with curvilinear streets and large lots. For economy's sake and to utilize all available space to maximum advantage, the units are laid out with living quarters on three levels, with a fourth level unfinished but suitable for use as an extra bedroom should the owner desire to put it to that use.

The structures are of frame construction, with



REAR view of a row of duplexes that are ready for brick veneer

MANOR—Three-Level Duplex Ranch Houses

One of largest Chicago jobs in single planned community calls for completion of 542 two-bedroom units and a shopping center in 18 months. Sales price will be under \$10,000 each



MAXIMUM privacy in a common unit is provided. Masonry fire-wall from basement to roof separates the two sides of each duplex

gypsum board sheathing and brick veneer. There are two separate basic floor plans with 12 distinctly different elevations so there will be no tendency toward monotony in appearance of the finished duplexes. Fronts are further varied by the use of stone, brick and wood in attractive combinations.

Interior finish is dry wall construction with gypsum board. This is unusual in Chicago but by diligent work with city code authorities and labor unions, Mr. Merrion was able to use this method in Merrionette Manor. Prefinished oak flooring, steel casements and quality millwork are standard in all the houses. Heat is supplied by a forced warm air furnace.

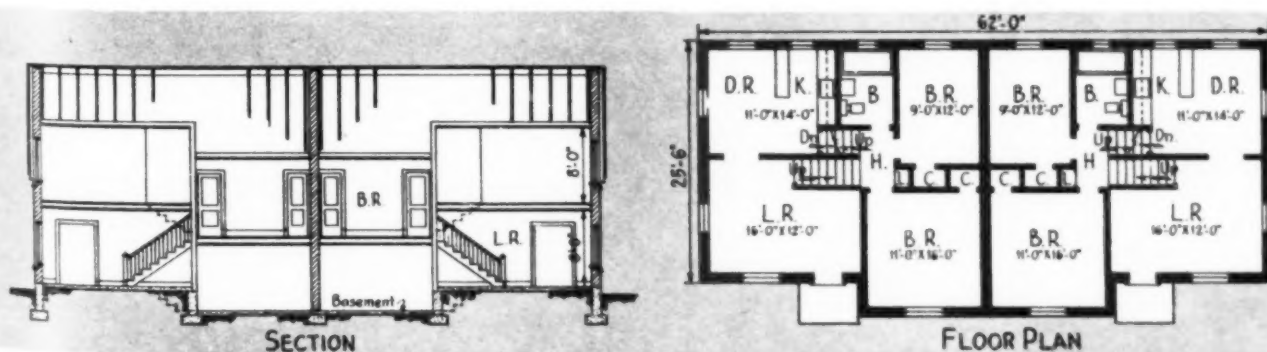
Emil Minx, architect, who designed the structures, detailed them so that standard lumber lengths and sizes can be used to eliminate as much cutting as possible. A small woodworking shop has been set up on the site, but this is used only for special cuts, such as roof rafters. Most of the cutting is done by two men with electrically-powered hand saws, who travel from job

to job cutting as the carpenter crews need the material.

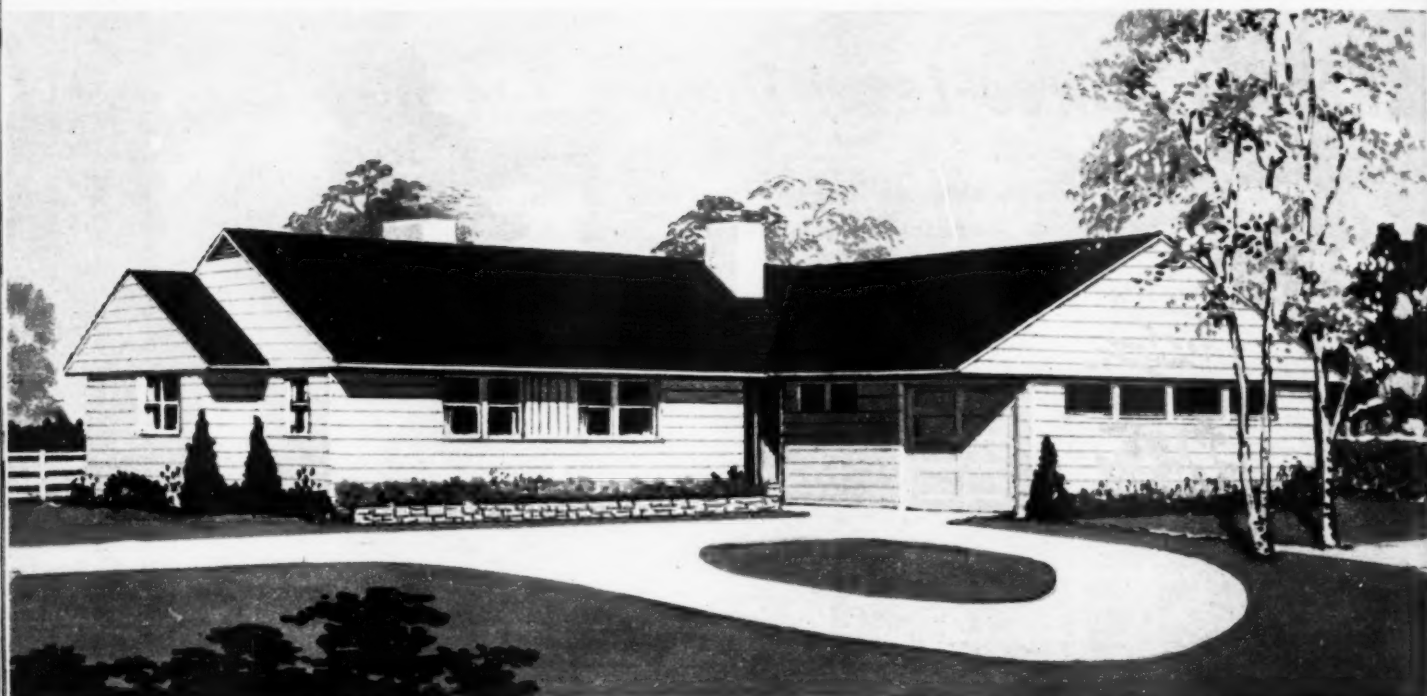
Further economies have been achieved by Mr. Merrion through his ability to purchase materials and equipment in large quantities, some of it in carload lots. Lumber is piled on the site as it is unloaded from cars, and a straddle-type lumber carrier hauls it from the piles to the various jobs.

Each side of the duplexes will be sold individually which poses the usual problem in maintenance of a single structure owned jointly by two tenants. For the first three years after sale, the Merrion organization will take care of maintenance of all common portions of the structures through an improvement association which will be organized for that particular purpose. Leadership and complete responsibility for the conduct of the association will be turned over to the residents of Merrionette Manor.

A complete shopping center to be located at the north end of the project will also be constructed and operated by the J. E. Merrion Co.



ROUGH draft showing one of the basic floor plans and a cross section illustrating the three-level arrangement of rooms



LOW, sweeping roof lines tend to give this house a ground-hugging effect. This is characteristic of Ranch House design

BLUEPRINT HOUSE NUMBER 12

William Arild Johnson
Architect

Sound Planning Produces Balanced Design

THE well-planned ranch type house illustrated on these pages was designed by William Arild Johnson, architect of Everett, Wash. Its room arrangement and pleasing exterior confirm the old adage that, "form follows function," wherein a good sound plan necessarily will produce a good design, if placed in the hands of a capable workman.

The average ranch house has a tendency to spread out indiscriminately over a large area, using the living portion of the house as a traffic artery to gain access to the other sections. The rooms in this house are well arranged in relation to each other. Each particular grouping such as living, service and sleeping quarters are all separate, yet access to each unit is easy from the front entry, which is one of the focal points of the plan.

Of interest is the position of the doors on the garage in relation to the street front. The architect has placed them on the side to eliminate the

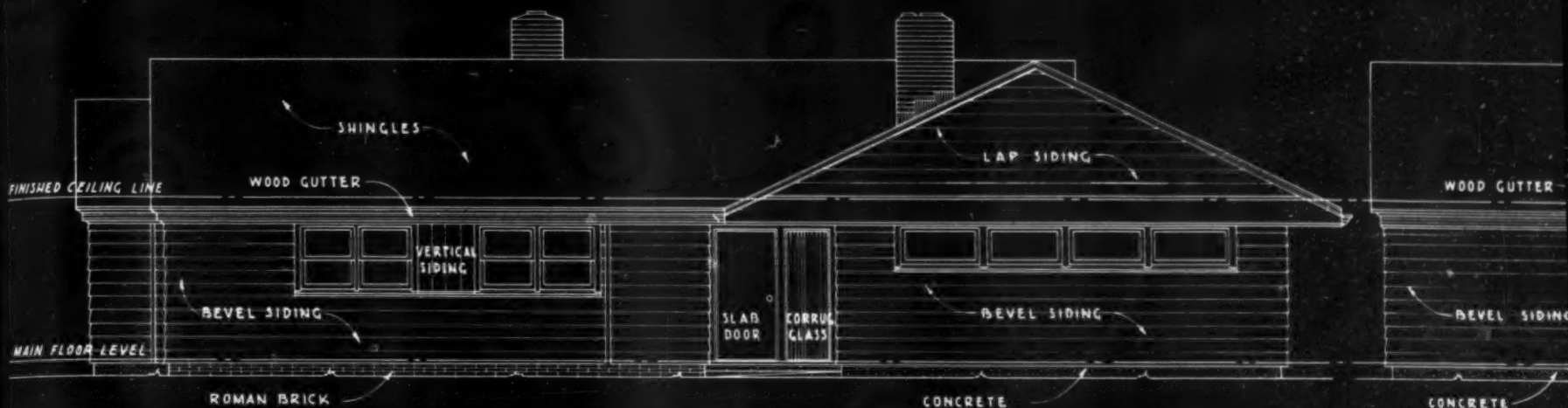
untidy appearance that occurs when these doors are left open.

The arrangement of the service portion is particularly interesting, since it recognizes the growing popularity of the combination utility-and-playroom in conjunction with the kitchen and makes the room accessible from the garage.

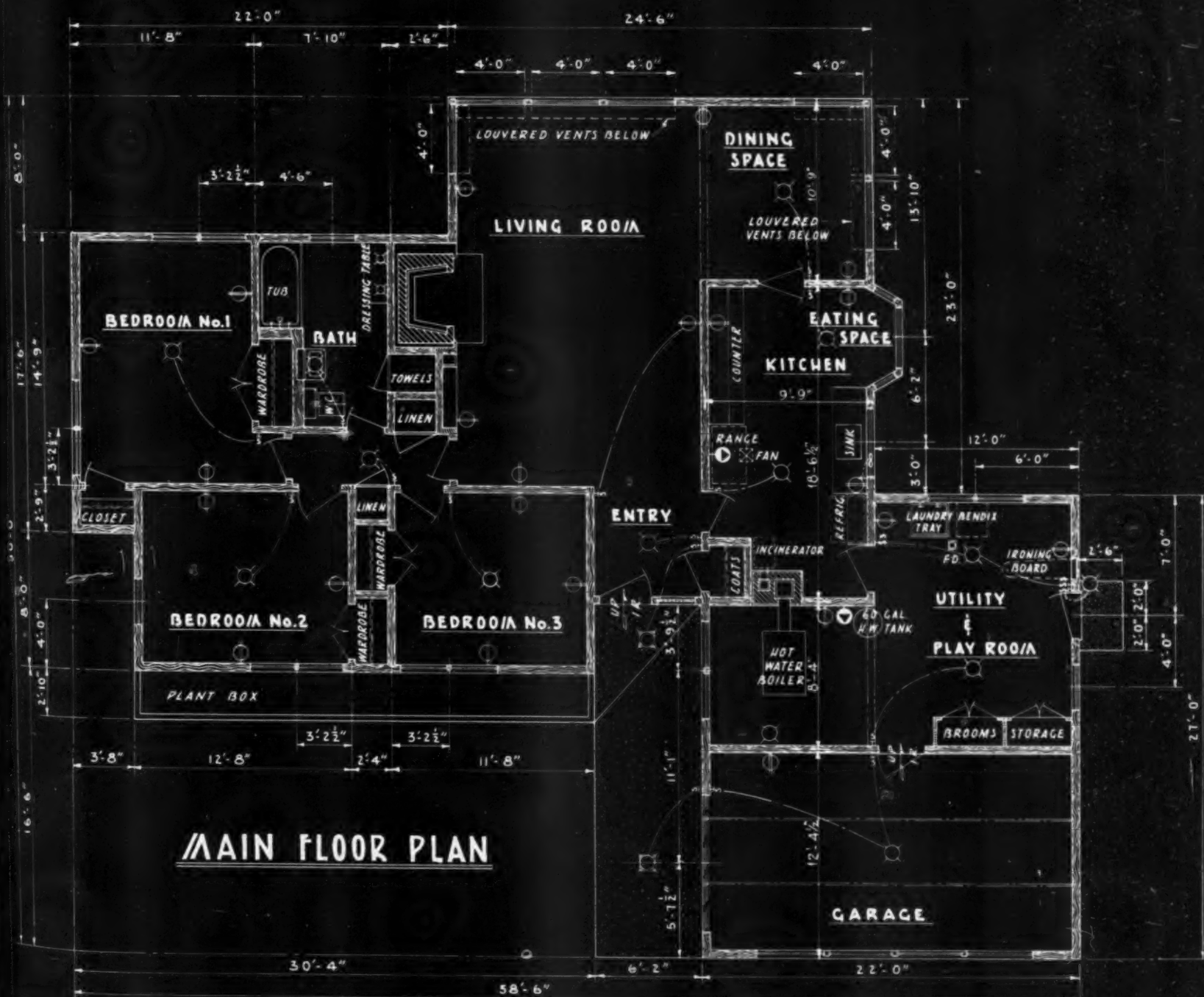
The construction follows the general trend for this type of building, as indicated on the plans, a concrete floor mat is laid over a bed of cinders or sand over the entire area. Framing and surface materials above are of wood, with plastered walls and ceilings. Heating may be by radiant panels in floor or through the usual radiator installation.

Large, fixed, plate glass windows in the living and the dining room look out over the intimate garden area in the rear of the property. Wood louvres under the windows provide adequate ventilation. Hinged wood panels are placed in the back of the wood louvres.

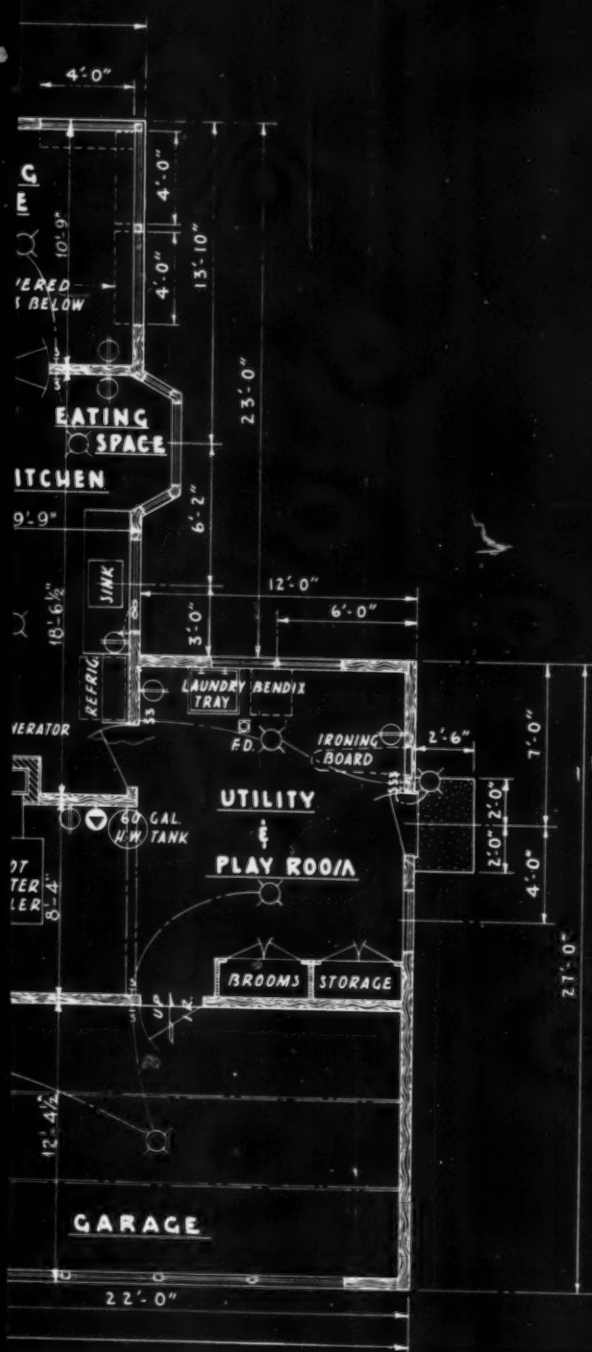


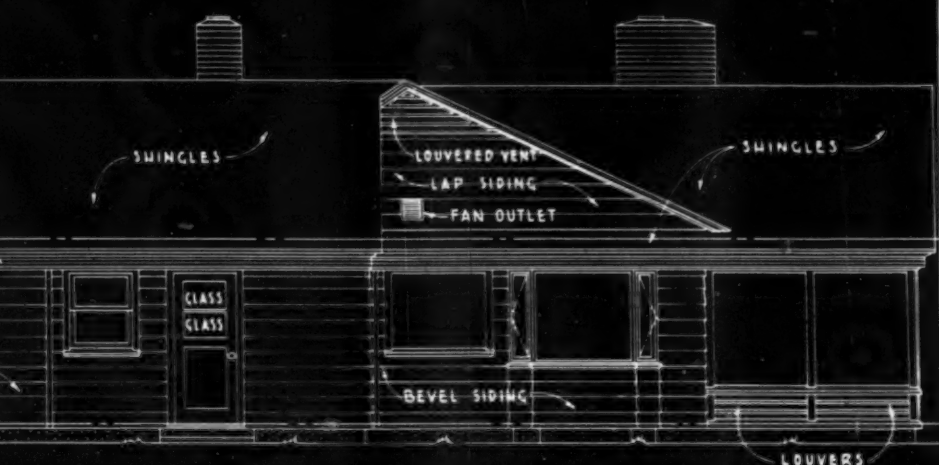


FRONT ELEVATION

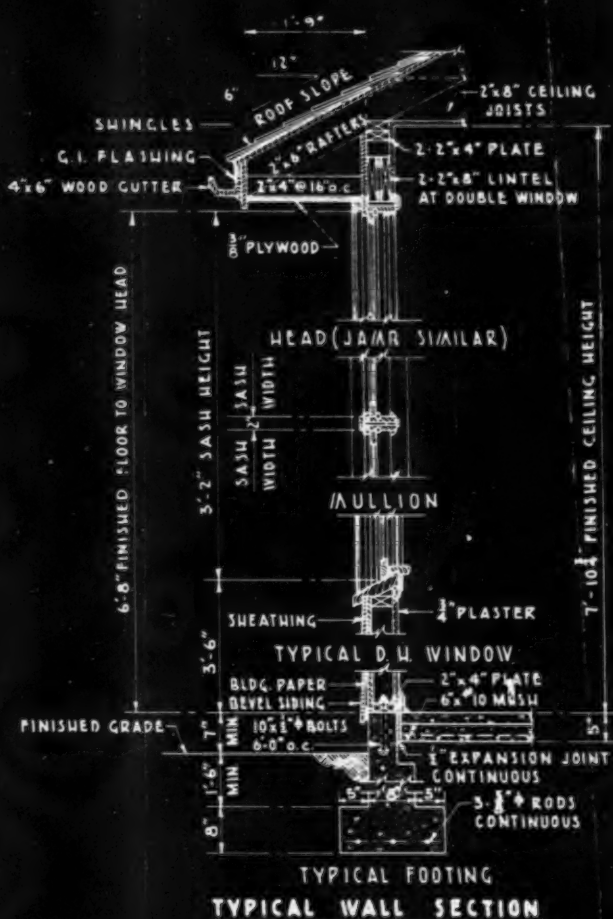


MAIN FLOOR PLAN





RIGHT ELEVATION



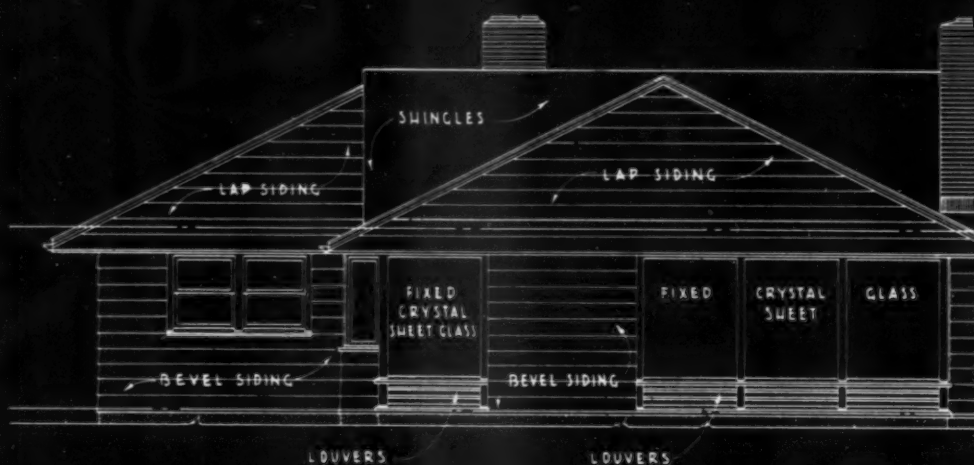
DESIGN No. AB 125

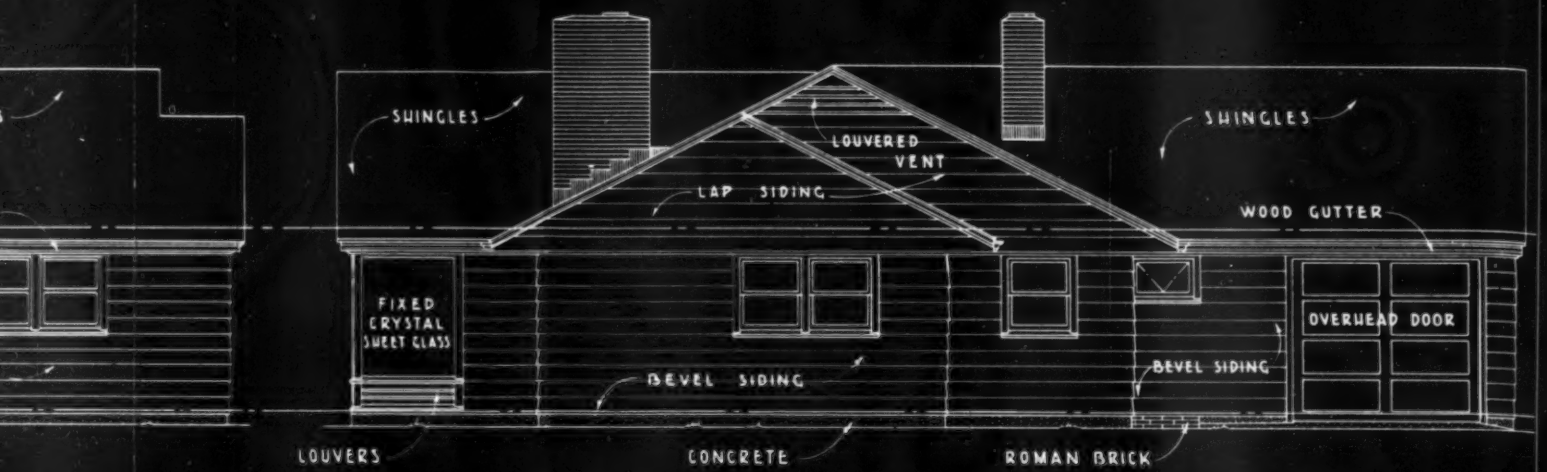
AMERICAN BUILDER BLUE PRINT SERIES

Designed By

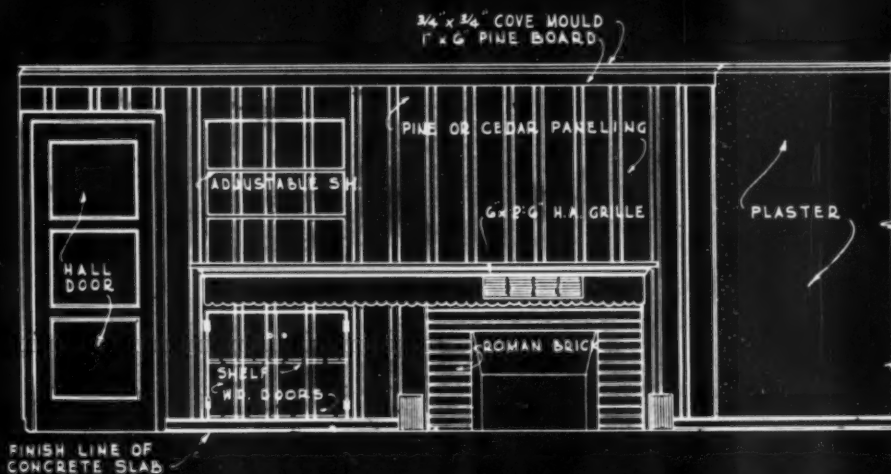
WILLIAM ARLID JOHNSON, ARCHITECT.
First National Bank Bldg., Everett, Wash.

Simmons Boardman Pub. Corp. 105 W Adams St., Chicago, Ill.

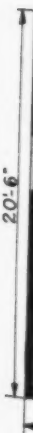




LEFT ELEVATION



PARTIAL ELEVATION OF LIVING RM.





THIS 16x32-foot house is complete with all the elements required for satisfactory living, except heating facilities

\$3,995 Buys Veteran a Home

Private builder develops house for less than \$4,000 to meet low cost demand. This attracted widespread attention from housing authorities

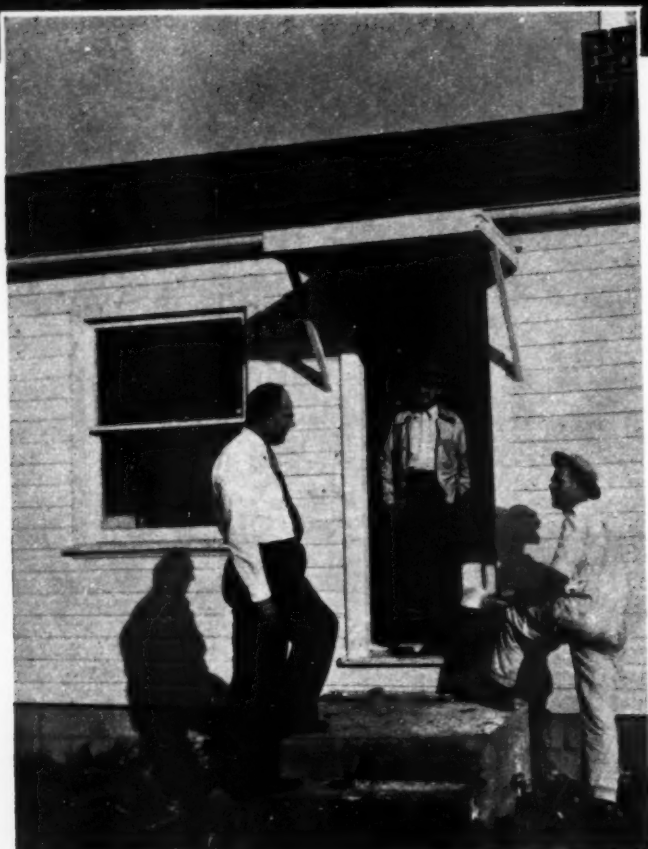


THE building triumvirate, known as C.B.S., was established by the Creith Lumber Company of Columbus, Ohio, for the purpose of building houses for veterans that would sell for less than \$4,000 complete. H. A. Creith, Ralph E. Brown and Fred H. Schwartz, all members of the lumber company, devised the C.B.S. "nom-de-plume," by putting together the first letter of each of their last names. This was done to keep accounts straight, since the time these three men gave to administration and supervision, was not charged to the veterans' project, but was absorbed by the lumber company.

The fact that the administrative overhead was reduced to the bare minimum, permitted the builders to concentrate entirely upon actual costs at the site. After a period of normal operations, during which a careful check was made, costs were established for the various portions of the construction work. After that, each skilled mechanic was put on his own and literally became a subcontractor, doing each portion of the work on a prearranged cost schedule. It then depended on the skill and speed of the individual, plus his willingness to work, as to the amount of money that he was able to earn.

"This incentive method of employment," said Fred Schwartz, whose job it is to see that materials arrive at each house on time, "has stimulated the men to the point where they are producing a better house in shorter time, than ever before. This speed permits us to get the house up for sale, and in the hands of the veteran that much quicker."

In bringing out some of the factors involved in build-



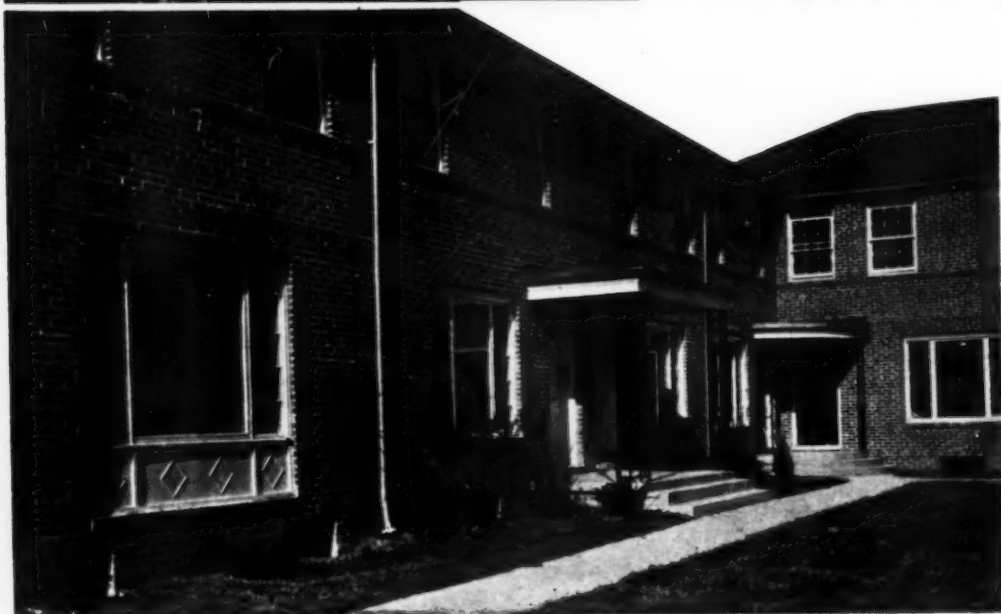
ABOVE is a general view of the Creith Lumber Company, whose three top men constitute the organization known as C.B.S., through which the house building operations are carried on. Offices and showroom are located in building in foreground. At left is Fred H. Schwartz, who has charge of all construction work on houses, with two of his "one-man" subcontractors

ing this type of house, Schwartz said, "Our method of overhead and labor relations have been responsible in a large measure for the economies that have been obtained. This, in spite of the fact that fixed costs for the various services and fixtures, are the same, whether they apply to a \$4,000 or \$10,000 house."

Commenting further, this builder stated, "It is interesting to note the stir that this operation has caused in building circles in Washington. Representatives of the various national housing organizations have visited these homes, and were astonished at what we have been able to accomplish without the aid of subsidies."

Each house has been placed on a lot 40x130 feet. The overall dimensions of the house is 16x32 feet. This is placed upon a concrete block foundation that extends below frost line. No basement is provided. The house contains four rooms and bath with two closets. The living room has a portion set aside for dining. Two bedrooms are included.

Walls are of frame covered with sheathing and drop siding. Roof of 210 pound asphalt shingles. Interior walls and ceilings are plastered over rock lath. Floors through-



IN the process of completion, the 12-apartment house building is shown in detail view at left. This building is being constructed by the Broad-Waverly Corp., a subsidiary of the Creith Lumber Co. On the opposite page, is a complete view of the apartment building. The overall arrangement combines three basic units together to form one structure

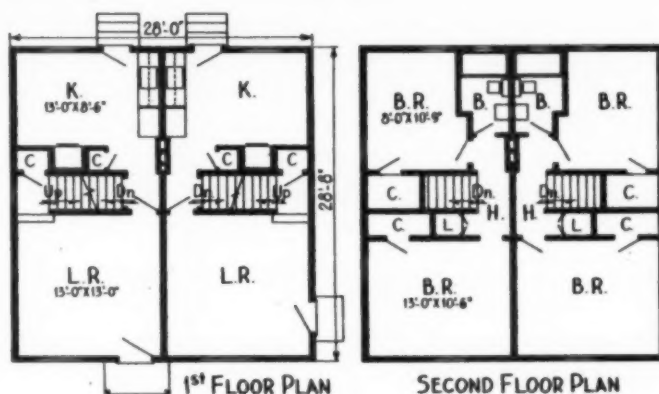


out are 13/16-inch oak, with Armstrong linoleum in kitchen and bath. Fixtures in bathroom and kitchen are Standard and Crane. Kitchen cupboards are of wood with linoleum top. House is piped for gas, and kitchen wired for electric stove, in addition to complete wiring for the entire house. Complete painting is done with DeVoe & Raynolds oil paints inside and out.

A total of 79 lots were purchased for this project. These are located over scattered areas. On these lots 59 houses have been built. In the course of their building, C.B.S. found that the house is a trifle small for veterans. Therefore, in the new project to be started soon, the houses will be increased to 20x32 feet, and will be heated with a Coleman floor furnace.

In addition to the veterans' homes, the Creith Lumber Co. handles extensive building operations in rental properties. Recently completed are 13 frame double houses, each apartment containing five rooms and bath with complete basement and attic. Each apartment has its own separate gas-fired warm air furnace, laundry and kitchen equipment. These buildings were completed in September, 1947, at a cost of \$10,500 for each building. Sixty dollars a month is the rent for each apartment.

The largest single venture started by this company is the Broad-Waverly Apartment Building. This structure, which is now in the process of completion, contains 12 separate apartments of five and six rooms each. A sep-



RENTAL housing in the medium priced bracket, is well represented in the 13 doubles shown above. These have recently been completed by H. A. Creith. Because of the sameness in the general design, the buildings have been staggered in their relation to one another. Floor plans show that two four-room apartments are contained in each building, complete with individual basement and attic

arate garage building at the rear contains a stall for the car of the occupant of each apartment. Each suite is complete with basement, laundry equipment, gas-fired warm air furnace, kitchen equipment, refrigerator and range. Exterior walls are of brick with slate roof.



Builders



LEFT to right, Howard Layton, Allan Brockbank, Stayner Richards and Edward Holmes who are building cooperatively in a new small-home development of over 1,000 units

Four builders hold down land cost by buying up old plat and replotting it. Self-contained community to have stores, school and church

CAN redevelopment pay? The experience of four western builders indicates that it can, under certain conditions. Trying to hold down the sales price of homes, and faced with high land cost in the choicer sections of Salt Lake City, these four turned to low value land in a less popular part of the city and are transforming it into an attractive development of modest homes.

It took more than a year to acquire the land, but the effort was worthwhile, because it is enabling the builders to deliver good dollar value in today's market by holding down land cost so as to put a maximum part of the purchase price into the dwelling itself. Houses are either two-bedroom or three-bedroom, with or without garages, and range in price from un-

der \$7,000 to a maximum of about \$8,500. Most are under \$8,000.

When completed, the development will include over 1,000 homes—a community large enough to support its own business area and be self-contained. Undoubtedly, it will start the growth of the city in a new direction.

The new development is called Rose Park and was conceived by Allan Brockbank, Salt Lake City builder, who is a regional director of NAHB and a former president of the Salt Lake City Home Builders Association. Three other builders are operating in the same development with him—Edward Holmes, Stayner Richards and Howard J. Layton.

There is an interesting bit of history connected with the land which formerly had been platted in the conven-

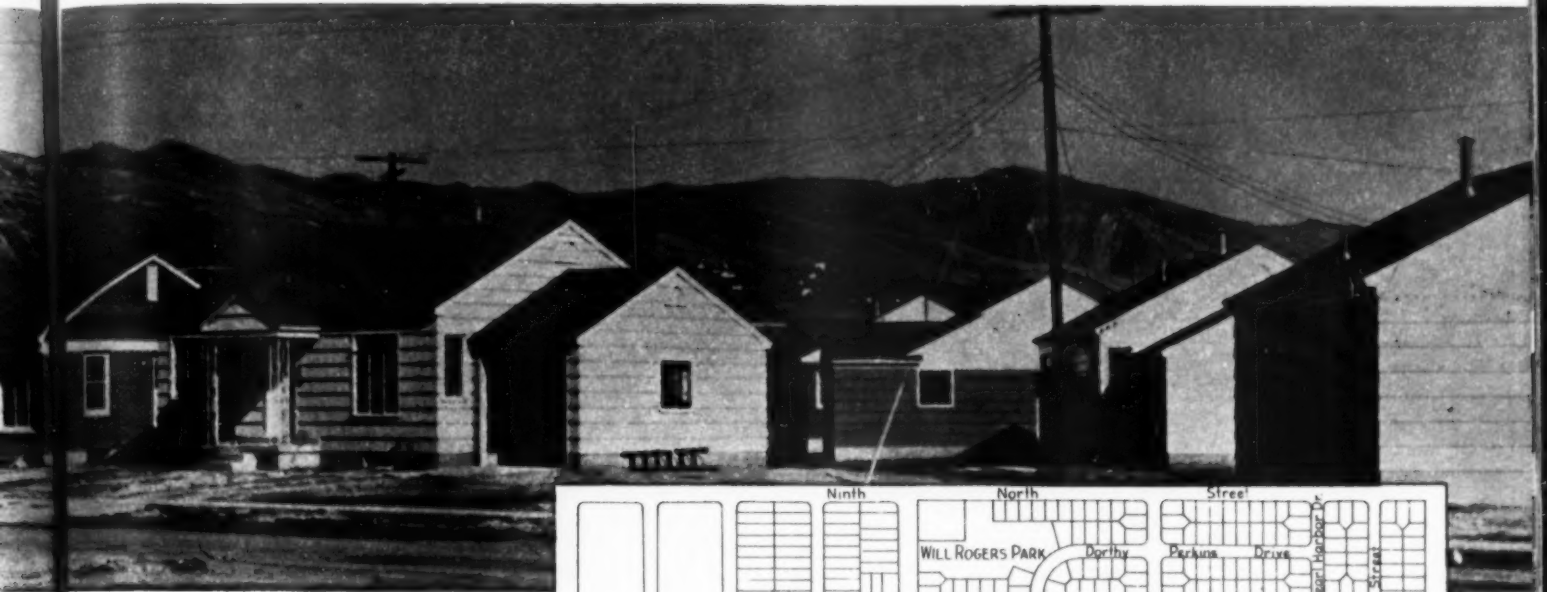
tional grid pattern of the last century. A copper smelter was erected adjacent to the area to compete with an existing smelter. The development was laid out and lots sold to workers who were to be employed in the new smelter. Apparently, the purchase of a lot was a condition to the hiring of each workman.

While the new smelter was completely built, it never turned a wheel. The entire outfit was bought by the copper company which would have been its competitor. Although platted, the residential area never was developed and only a dozen or so houses ever were built. Title to most of the lots was held by individuals who never did anything with the land. The lots were passed by legacy through about three generations so that, when Mr.



ONE of small home designs used in Rose Park by Allan Brockbank. Two-bedroom unit with attached garage has full basement, tile bath, cabinet kitchen; is fully insulated

Deliver Reasonable Priced Homes

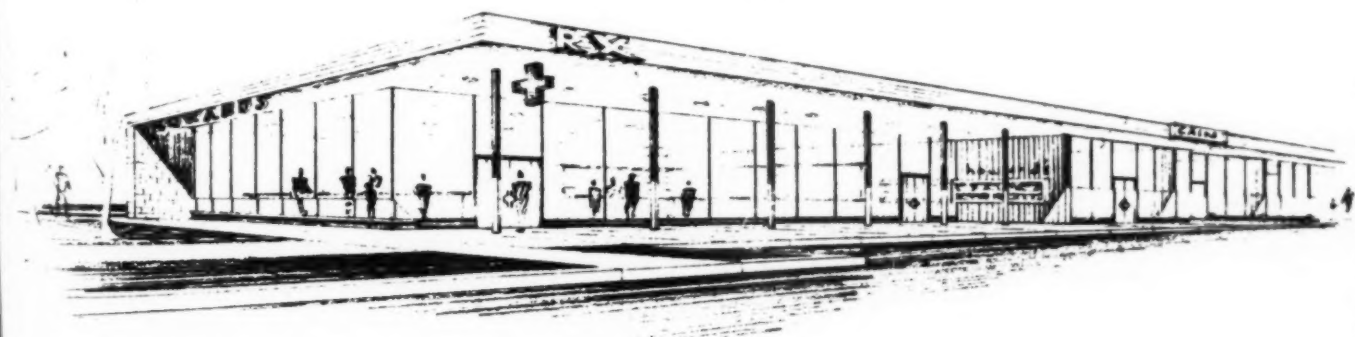


Brockbank first conceived the idea of acquiring them, the owners were scattered all over the United States and other parts of the world.

It is probable that the monumental task of buying up so many small parcels of land had discouraged previous development. Mr. Brockbank decided to tackle it, however, and finally completed the tedious, lengthy process of running down all the heirs and getting deeds to nearly all of the lots. Enough were secured so that half the area can be developed under a new plot plan. A few hold-outs may make it necessary to develop about one-third of the area on the original plot plan. A main highway bisected the development and, of course, had to be preserved as it was originally. The developers are planning the business center along



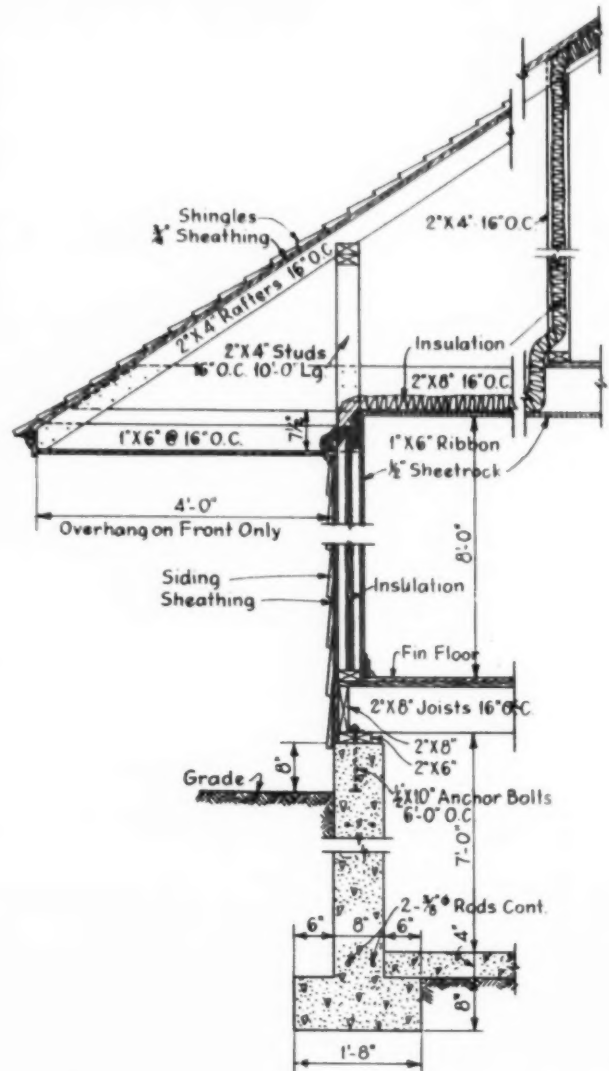
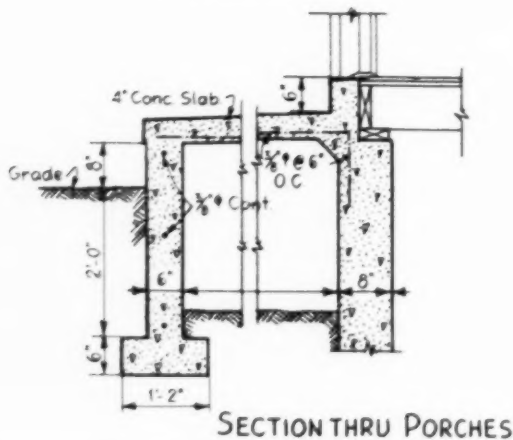
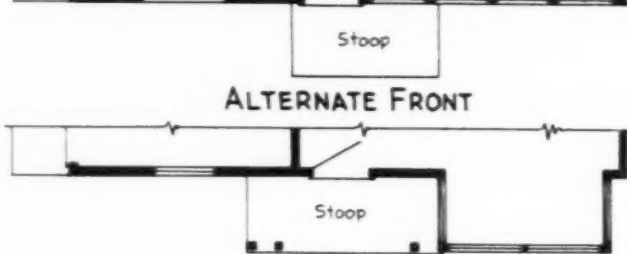
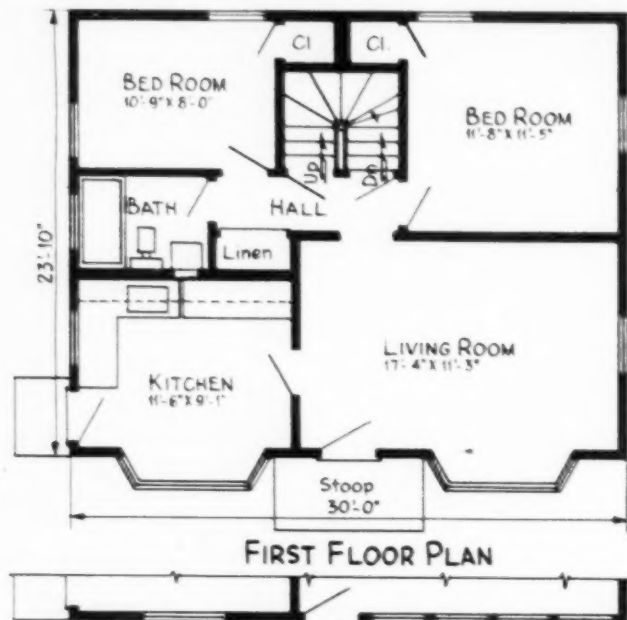
SHADED portion of Rose Park, replotted Salt Lake City development, is under construction



ONE of the suggested buildings for the business district which will be modern in design with plenty of parking area



ANOTHER Brockbank house, designed by M. E. Harris, Jr., provides space for future rooms. Studs are 10-foot instead of usual 8-foot, giving extra attic space. Windows and insulation are installed and heating ducts provided so owner can finish rooms later. A bearing partition is used in basement to facilitate use of space in the future. Three front elevations are used to vary exterior appearance. Detail of the variations and the elevation are shown in drawings below





FLOOR PLAN

TWO-BEDROOM unit being built by Edward J. Holmes is brick veneer over cinder block on poured-concrete foundation. House priced at \$8,000



this highway, with ample parking space, to separate the residences from the busy street.

In the redevelopment, the builders are making provision for a church and school with playground space adjacent. Commercial structures are being planned, with designs in the modern manner. The uses to which stores will be put is being determined generally in advance. Sufficient parking area is laid out to avoid congestion during busy shopping periods.

While the area itself is level, the new plan provides curvilinear streets to give variety and interest to the development and to discourage through traffic. Lots are small, however, to keep cost down. Few are more than 60 feet wide, and many are under 50 feet. Depths range from 80 feet to about 100 feet.

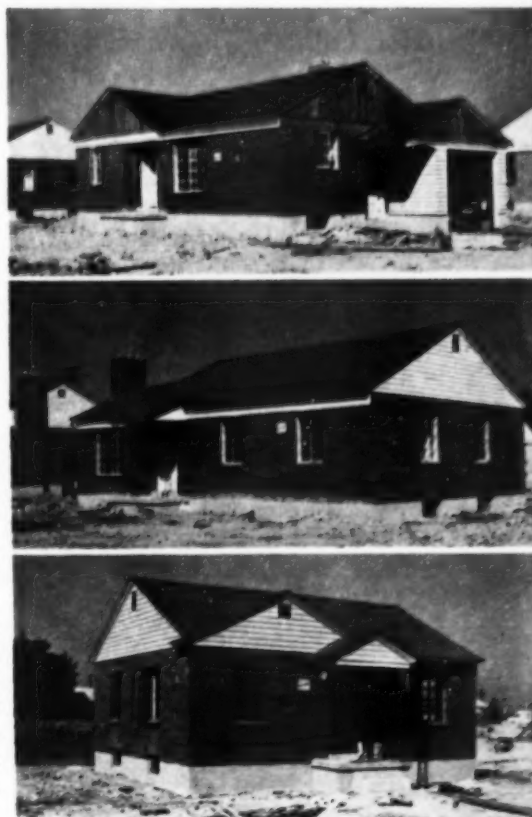
Each of the four builders uses his own plans. They are similar in character, but a lot of exterior variation is achieved. This, with the curved streets, prevents any peas-in-a-pod appearance which so often makes the small house development a very monotonous one. The street layouts also

keep most of the houses at an angle with those adjacent, permitting more light to enter windows, despite the small lots.

Construction is frame or brick veneer over cinder-block tile. Some houses have stone veneer fronts to give exterior variation. All have gas heat, and the utilities are consolidated in the basement to leave space for an extra room or two to be finished later.

Mr. Brockbank uses one design, among those pictured, which has an expansion attic roughed in and insulated. The attic has 10-foot studs instead of the usual 8-foot. The extra length raises the roof line, permitting extra rooms to be finished later. Many of the houses also use bearing partitions in the basement instead of posts or columns to facilitate subsequent use of the basement area.

All street improvements are put in by the builders and are included in the price of the homes. Heavy grading equipment is used. Much of the framing is precut at the site for efficient fabrication. The result is modest, sturdy homes, priced low for today's market.



THREE houses by Holmes; upper two have three bedrooms



FIRST FLOOR PLAN

STAYNER RICHARDS varies exterior of some units with stone and knotty pine trim, as at right. Though small, unit has large windows. Roof projection protects entrance



Getting Ready

Roomy lots, good room dimension and quality construction needed in medium-priced home to preserve values in future, says builder



A HIP ROOF is used to vary exterior of the single floor plan used in Sutton Park

THE medium-priced home, in a buyer's market in the future, will have to have a lot of at least 10,000 square feet in the opinion of an eastern builder. He feels it is good policy to get ready for that market by observing this minimum, even today, when demand is great and often makes it possible for a builder to move houses which are not entirely satisfactory to the buyer.

In developing Sutton Park, a 100-house project in Hartford, Conn., Irving Stich is maintaining that standard to preserve values for those who purchase his houses. He also is giving good dimension on the theory that homes running close to \$16,000 must have fair-sized rooms to attract present-day buyers. He manages to

hold his price at \$15,500, despite rising labor and material costs, by pre-cutting all framing on the site and following a single floor plan with a minimum of exterior variations.

In the Sutton Park development, the builder grades the streets and puts in the sub-base and sidewalks. Surfacing will be done by the city. Lots are 75 feet wide by 140 feet deep and represent \$2,000 of the purchase price.

The houses are conventional colonial, designed by Kane & Fairchild of Hartford. The floor plan, though conventional, is arranged for convenience. The laundry is on the first floor level, adjacent to the kitchen and opening into the rear yard. There is a breakfast nook in the

kitchen, in addition to a full-sized dining room. The second floor is reached by stairs from a side hall off the living room. There is one small and two large bedrooms.

Copper plumbing is used throughout. The kitchen has factory-built cabinets, counter-high sink and work space with an automatic dishwasher and ventilating fan. A gas-fired furnace with forced circulation provides heat. Except for the space used by the heating plant, the entire basement area is free because the laundry is on the first floor.

Larger trees are left intact on the lots wherever possible to help give the development a finished appearance. Each house is landscaped by the builder on completion.



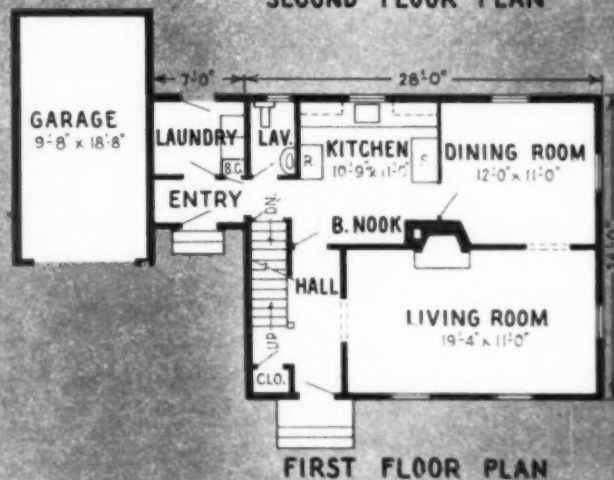
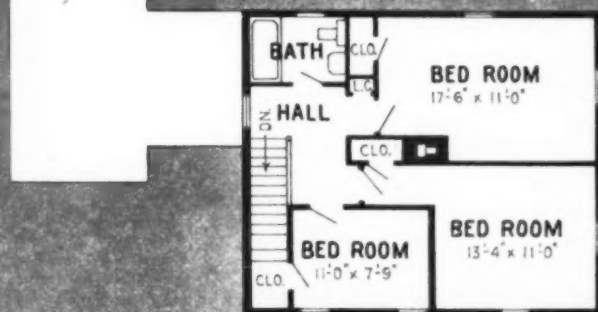
for a Buyer's Market



MATERIALS AND EQUIPMENT USED

Flintcote 210 lb. asphalt roofing
 Janitrol gas-fired furnace
 Kimsul 1-inch sidewall insulation
 Baldwin Hill Black mineral wool cap insulation
 Oak hardwood floors
 Foundation 12-inch poured concrete
 Double-hung wood window sash
 Armstrong standard gauge linoleum
 Schlage hardware
 Kaiser dishwasher
 Ketchum bathroom cabinet
 Veos steel tile bathroom
 Kohler bathroom fixtures
 Pryne ventilator fan
 Copper plumbing
 Factory-built cabinets

ANOTHER variation of the exterior, with shadow line to break the front elevation midway, is shown above. Note large living-room window. Below, floor plan shows convenient arrangement of service area with laundry on first floor level having access to the kitchen and to outdoors. This leaves full basement for future rooms if desired



Costs Up— Profit Percentage Down



THIS small home was built in Cincinnati in 1941. Table below shows the builder's cost

Item by item cost comparison shows how builder's percentage of profit has decreased as costs for material and labor have risen in six years

WHO gets the huge (allegedly) profit on newly constructed homes at today's high cost figure? The builder always is credited with being the one who gets the big share because he is nearest the purchaser and handiest to blame. But every builder knows his percentage of profit is well below what it was six years ago. It would be helpful if more buyers knew just how much cost increment has been added to each item in construction since before the war.

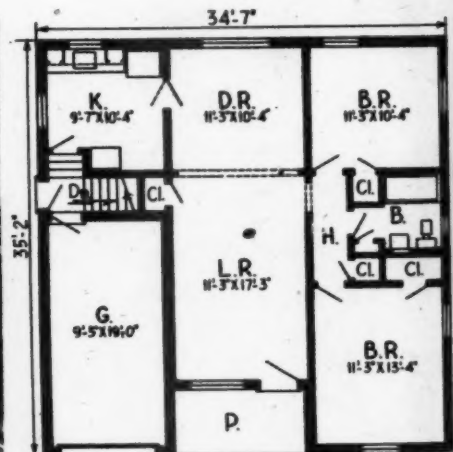
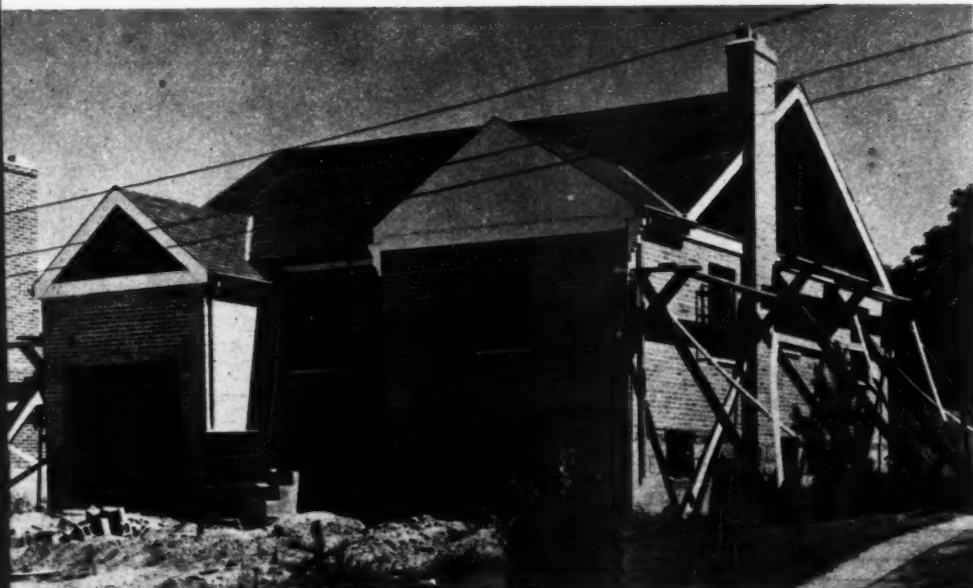
The figures shown here give a good comparison which can be understood easily by any prospective buyer. They were furnished by Martin L. Holman, Cincinnati builder, who carries on a modest operation. He will construct, normally, between 20 and 30 houses a year. There are a lot of builders in the United States who operate on a comparable scale.

One house constructed in 1947 has exactly the same floor plan, with slightly larger dimension, as another finished in 1941. It has a little more value in it than the first house—more tile in kitchen and bath, venetian blinds instead of window shades, gas heat instead of a coal heater, and landscaping. Otherwise, it is essentially the same and shows where building costs have gone.

COST COMPARISONS OF ITEMS IN TWO IDENTICAL HOUSES
BUILT IN CINCINNATI IN 1941 AND 1947

	Built in 1941	Built in 1947
Plans	\$ 25	\$ 50
Specifications	20	42
Survey and description	35	54
Excavation	45	180
Permit	12	20
Water tap	31	59
Footings	80	167
Grading	150	294
Concrete block waterproofed foundation	254	522
Plaster, labor and material	250	661
Hardwood floors, labor and material	141	397
Glass and glazing	30	60
Painting, inside	75	150
Painting, outside	75	160
Electrical work and fixtures	78	183
Sheet metal work	48	109
Kitchen cabinets	51	109
Garage door	38	77
Cement work, labor	175	372
Plumbing	506	1,077
Seeding yard	85	123
Lumber, millwork and sash	784	1,734
Tile floor in bath, tile sink top in kitchen	43	510
Tile bath and kitchen	142	450
Gas furnace	18	93
Window shades	40	75
Venetian blinds		
Hardware		
Brick, roofing, angle iron, steel rods, cement, sand, etc.	747	1,540
Brick, labor	225	710
Carpenter labor	375	750
Insulation		97
Decorating		130
Roof		134
Drain tile		20
Shrubbery		51
Miscellaneous labor		435
Insurance, unemployment compensation, social security, overhead		235
Cost of lot	1,000	1,920
Total cost to build	\$5,578	\$13,752
Selling price	6,000	14,200
Builder's profit	422*	448

*Builder from this profit paid for bookkeeping and overhead. No superintendent or foreman. These costs figured in 1947 house under miscellaneous labor.



FIRST FLOOR PLAN

HOUSE at left is just being completed across the street from the one above. The floor plan is identical for both houses, but 1947 house has slightly more dimension

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RADIANT heating installations save wall and floor area by eliminating the need for radiators and registers

Engineered House Construction

Radiant Heating With Warm Air

By J. L. Shank
Consulting Engineer

In this eighth article of the series on heating systems, the widely-discussed subject of radiant panel heat is further analyzed. The November Anicka Blueprint house No. 10 is engineered for a radiant panel system using forced warm air as the heating medium

RADIANT HEATING is no doubt the most discussed subject in the heating industry today. In the majority of instances, discussions center around whether pipes should be imbedded in the ceiling or in the floor, the center to center measurement of these pipes, and the type of material of which the pipes are made. There is little, if anything, said about the use of warm air as the medium for radiant panel heating.

Perhaps the first radiant heating systems in use were those installed by the Romans. These systems were designed with masonry ducts built beneath floors or within sidewalls through which hot gases flowed. Some of the most famous of these warm air

radiant heating systems were installed in the baths at Caracalla and Pompeii. Even some of the barges used by the Roman emperors provided outstanding examples of the use of warm air radiant heating.

Even today radiant heating exists in such common places as the open fireplace and outdoor camp fires. In instances such as these, no attempt is made to heat the air or enclose surfaces which surround the persons involved. As a matter of fact, the temperature of air around an open fire can be very low, but the radiant heat which the fire produces will provide a comfort condition for persons within range. This comfort condition is brought about by the radiant heat rays



THIS warm air radiant panel heating system is engineered for the one-story, three-bedroom Anicka Blueprint House No. 10, plans for which appeared on pages 98 through 102 in the November *American Builder*

emitted by the fire which heats the air.

The sun can be considered as a medium for the emission of radiant heat rays. Radiant heat rays from the sun are like light rays since they travel in straight lines, and are either absorbed or reflected, depending upon the nature of the surface which they contact. Although radiant heat rays from the sun pass through air temperatures many degrees below zero before they reach the earth, they warm every solid object which they contact.

When the sun is bright and the air is cool, standing in the sunshine will usually make a person comfortable. By moving out of the sunshine into the shade, such as behind a building, a person becomes chilly.

The reason is that the radiant rays from the sun have been cut off, and this fact changes the comfort condition.

The Heating System of the Body Best Describes Radiant Heat

Perhaps the best way to understand radiant heating, is to understand the

heating system of the human body. The body itself should be considered a heater. The fuel consumed by this heater is the food that is eaten and the air which is breathed. Therefore, in order to maintain a healthy and comfortable condition, the body must continually lose its heat. Thus, if the surrounding conditions are such that the body heat is expelled too rapidly, a person feels cold. If the body heat is released too slowly, a person usually feels warm.

Body heat is lost in three ways—by radiation, convection, or evaporation. The heat loss by radiation is that which is given off by the body to cooler objects or surfaces. The loss by convection is that which is carried away by the movement of air over the clothing or skin. The loss by evaporation is the heat that is used in vaporizing the moisture from the surface of the body.

Since there is little heat loss by evaporation, it is necessary to provide a proper balance between the radiation and convection heat loss in or-

der to provide a comfort condition.

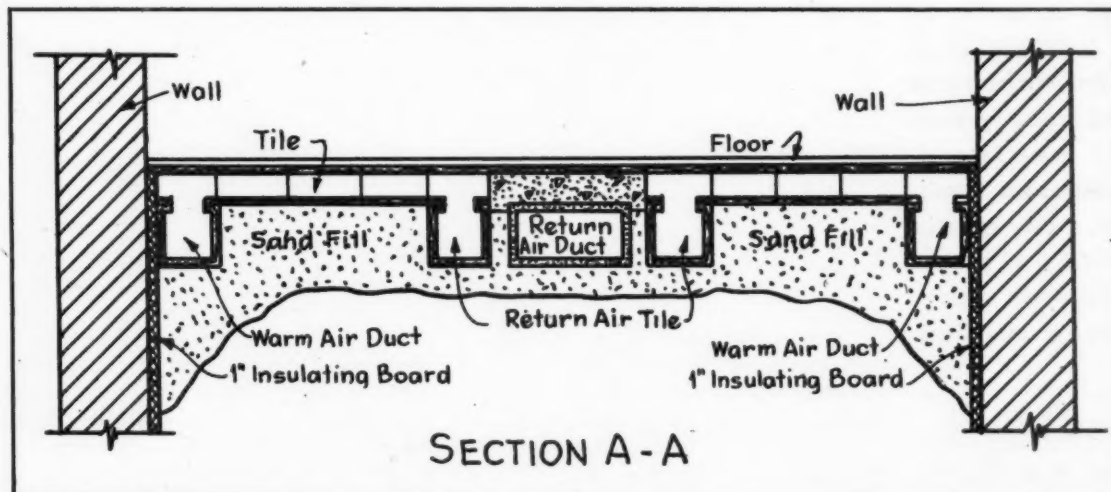
Within what is known as the comfort temperature range, the body reacts the same whether excess heat is given off by convection to the air, or by radiation to surrounding surfaces. This, of course, depends upon whether or not the proper balance is maintained between these two types of heat loss. If the heat given off by convection increases, the body heat given off by radiation will necessarily decrease or vice-versa. Therefore, with radiant panel heating, it is possible to have a comfort condition at a much lower air temperature than is required with convected heat. The lower air temperature also makes the air feel fresher and more invigorating, with the humidity condition generally good.

With any modern, properly-designed and installed heating system, performance can be guaranteed to the satisfaction of the owner. It must still be admitted, however, that all methods of heating have certain advantages and disadvantages.

Advantages of Radiant Panel Heating Are Many and Varied

An advantage in radiant panel heating is the saving of valuable floor and wall space by the elimination of radiators, grilles and registers. If proper evaluation is given to space gained, the net result will be an increase in usable space, the value of which should be considered when figuring the total cost of the heating system.

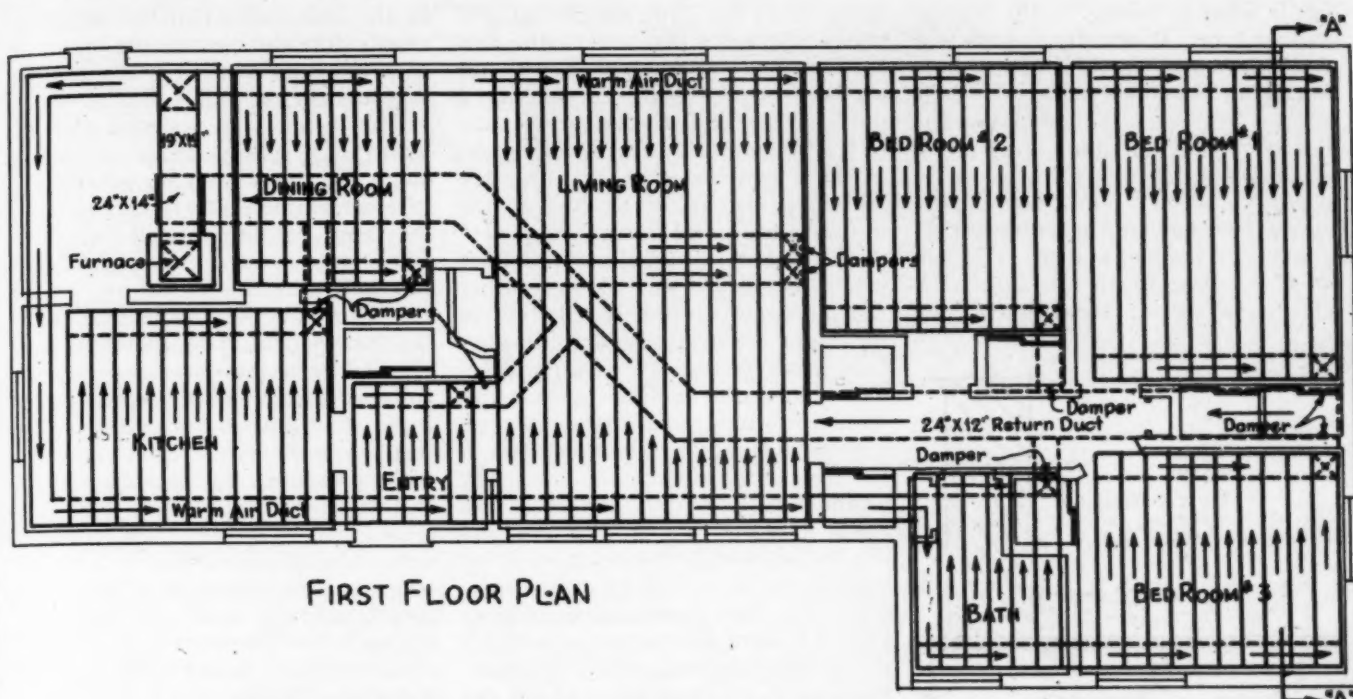
Radiant panel heating reduces surface discoloration since there are no high temperature concentrations of heat which normally cause streaking and dust deposits on walls and ceilings. This means a considerably reduced cost in building maintenance as redecorating will not be required as



SECTION drawing showing detail of floor construction and tile duct system. Although this floor is designed for tile, there are other common materials that may be used

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FIRST FLOOR PLAN

DRAWING at right shows detailed arrangement of warm air ducts and returns with dampers as they should be laid under the floor to achieve maximum efficiency from the system

often as with other types of heating.

Another advantage with radiant panel heating is the complete freedom possible in decorative treatments. In residences, with radiant panel heating, there are no restrictions in the arrangement of furniture or of wall decorations.

With radiant panel heating, the complete system is progressively installed as the building progresses. This fact avoids the necessity of temporary settings of the equipment and makes heat available during the construction period.

Radiant panel heating installations should cost no more than other efficient methods of heating. The operating cost is usually less. A factor

here is that the low temperature panels create a minimum movement of air which materially reduces the heat loss when compared to the relatively concentrated high temperature air currents obtained from conventional warm air or radiator-type heating system. The lowest overall operating and maintenance expense should be the probable result of a radiant panel heating system.

Radiant panel heating greatly reduces convective drafts and stratification normally created by conventional heating systems. This eliminates zones of discomfort, particularly at the floor level.

A radiant panel heating installation usually makes use of at least one or

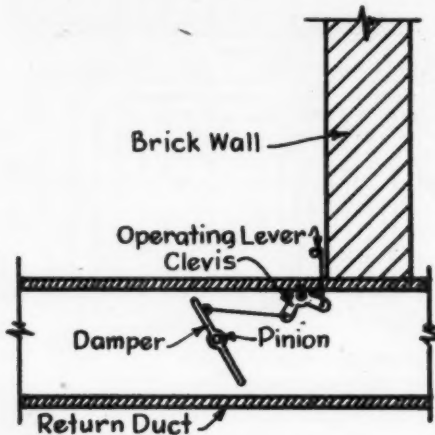
more of the enclosing surfaces of the space which is heated. This surface is commonly referred to as the radiant panel. Good practice in design dictates the use of a large area at a relatively low temperature to provide the maximum comfort condition.

This large area, however, usually comprises a considerable mass of material with a great amount of heat storing capacity. A certain amount of heat lag results between the time the room thermostat calls for heat input and the actual time the input becomes effective. The time lag may be kept within a very close range when a proper control system is installed. Perhaps the best system to use in controlling a radiant panel heating sys-

HEAT LOSS CALCULATION SHEET

ROOMS	FIRST FLOOR				SECOND FLOOR			
	Kitchen	Dining Room	Living Room	Entry	Bath	Bed Room No. 3	Bed Room No. 1	Bed Room No. 2
	Exposure B.T.U.	Exposure B.T.U.	Exposure B.T.U.	Exposure B.T.U.	Exposure B.T.U.	Exposure B.T.U.	Exposure B.T.U.	Exposure B.T.U.
Infiltration	28 1610	18 1030	66 3800	20 1150	13 840	21 1670	32 1940	16 920
Total Exposed Wall	184	84	296	48	96	188	296	80
Glass	24 2170	28 1810	68 6100	33 2900	11 1120	27 2440	32 2900	16 1460
Net Wall	160 3280	44 930	140 2900	15 300	85 1910	141 2320	168 3300	64 1280
Floor								
Ceiling	130 1040	90 640	290 2900	42 336	48 430	110 880	164 1230	110 880
Total B.T.U.	8620	4360	10830	4776	4368	7610	9330	4530
Approximate Length of Duct in Ft. to Each Room	78'	35'	75'	91'	131'	148'	72'	88'
Furnace Bonnet Temp.	165°	165°	165°	165°	165°	165°	165°	165°
Temp. Drop Between Bonnet and Panel	19.5	8.75	19.75	22.75	32.75	38.25	16.0	15.0
Average Air Temp. Entering Panel	144.5°	156.25°	145.25°	142.25°	132.25°	125.75°	147.0°	150°
C.F.M. Factors	.0133	.0119	.0131	.0130	.0163	.0164	.0131	.0125
C.F.M. Room Requirement	107	52	221	65	66	129	122	57

tem is what is known as the indoor-outdoor type. When this is done, the temperature of the heating medium flowing through the panel is directly affected by the outdoor temperature, thus achieving an ultimate result of approximately a one to two degree indoor variation. Sun effect should always be considered when designing any type of control system. The sun effect will have much to do with the total overall result, regardless of the



DETAIL OF PANEL BALANCING DAMPERS

type of control system used in any building.

The question of humidity usually comes up in connection with radiant panel heating. Actually, in the majority of localities within the United States, with the possible exception of a few days each year, humidity is much greater than that required for comfort conditions. Thus with radiant panel heating, no additional moisture will be required because the air temperature is increased very little, expands only slightly and does not grasp for additional moisture. The air will not feel dry, as a result, since the moisture in the membranes of the nose and throat will not be absorbed. With a few exceptions no additional humidification is required when radiant panel heating is installed.

Very little technical information and data is available on radiant panel heating, using warm air as the heating medium.

Since most of the technical data and information available uses warm water as the radiant panel heating medium, it has been necessary to transpose these calculations to utilize them for warm air. Nevertheless, the system, as figured and designed, will operate effectively and efficiently.

The system discussed here is based on the theory of flow. It is assumed that water and air flow are about the same. Thus, the warm air panels are

designed in the same manner as grid panels are for warm water—the first row of tiles to be supplied with air are the last to return. This sets up a uniform air flow through each row of tile because each row in each panel is of the same length. Therefore, the resistance through each row of tile is theoretically the same.

The system was designed for a floor panel installation, and like any other radiant panel heating installation in the floor, surface temperature governs what the ultimate result will be. The maximum surface temperature with which any radiant panel heating system will operate when installed in the floor is 85 degrees F. It is not meant that the system will not operate at a higher temperature, but that if a higher surface temperature is required, the floor will be uncomfortably warm for long occupancy. Therefore, this warm air radiant panel heating system was designed for a maximum surface temperature of 85 degrees F.

System Designed to Utilize Available Standard Materials

The system was also designed as nearly as possible to utilize standard materials available. The forced warm air furnace may be from any standard manufacturer, although this plan calls for gas firing. For economical operation, the furnace should have an overall operating efficiency of from 80 to 85 per cent. It is suggested the filters and the automatic humidifier normally furnished as standard equipment be eliminated, as they are of no value as far as the operation of the forced warm air heating unit is concerned when it is connected to a radiant panel heating system.

The system was designed using hollow tile in the floor similar to radiant tile. The radiant tile itself constitutes the finished floor. It is, however, possible to lay linoleum, carpeting, or a finished wood floor on this tile and good results will be achieved. If a hardwood floor or carpeting is laid in some of the rooms, and the other rooms left with the tile as the finished floor, it will in all probability be necessary to increase the temperature of the air flowing through the panels under these finished or carpeted floors in order to obtain the correct surface temperature to heat these rooms.

The control system for the installation should be of the indoor-outdoor type with continuous fan operation starting at any time the outside temperature drops below 65 degrees F. This control system should be connected to the solenoid gas valve, which furnishes gas to the burner, in such a manner that either the outdoor bulb

or the bulb located in the warm air supply duct can operate the burner at such times as there is a temperature drop outside or within the duct itself.

The system was designed with the warm air supply ducts extending along the outer wall to provide the greatest temperature to the panel at the point of the greatest heat loss. The supply ducts are 12x12-inch tile with openings in the top of the tile to provide the flow of heat to the tile floor panels. The interconnecting tiles between the various panels are fully enclosed without openings, as there are no panel tiles connected to them. The same interconnecting tiles with openings in the top are connected to the panel tiles through which the return air flows to the main return air duct. The return air duct is a formed concrete duct into which the return tiles from each panel are connected. Between the tile panel and the main return air duct, butterfly dampers are installed. The principle involved in installing these dampers is to vary the flow of air through each panel so that a uniform temperature can be obtained throughout the entire structure. It is also possible to close the damper in the return of any of the rooms, thereby restricting the flow of air through the panel, which in reality will reduce the room temperature which the panel supplies.

The forced warm air radiant panel heating system was calculated in the same manner as is normally used in figuring a forced warm air heating system of conventional design. The calculation chart accompanying this article is the same as that normally



MANUFACTURERS are producing a good supply of furnaces for this type

used. A maximum furnace bonnet temperature of 165 degrees F. was decided upon in order to obtain a minimum entering air temperature of 125 degrees F. for any one panel. From this information the C.F.M. required for each room was obtained. After calculating the heat loss for each individual room, in a normal manner, the total heat loss was obtained, namely 59,955 B.T.U., from which the forced air furnace capacity was selected. From these calculations, the

C.F.M. mined, against viding th manlike capacity feet per determin

No ot mention lations, to deter tive tem (mean e usually ing radia this was job is th extensiv through dampers most an the desi probabl on this M.E.T., rate fro area if u

The b air radi designed House l ber issu

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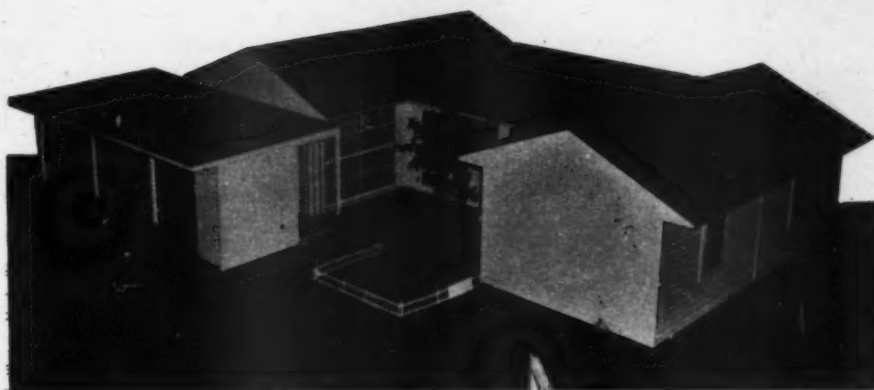
insulati es belo supply with th

C.F.M. of the blower was also determined, as well as the static head against which it is to discharge, providing the tile is laid in a good, workmanlike manner. The total C.F.M. capacity of the blower being 819 cubic feet per minute, the static head was determined to be one-quarter inch.

No other calculations, except those mentioned, were used. In some installations, it no doubt will be necessary to determine the M.R.T. (mean relative temperature) and the M.E.T. (mean effective temperature) which is usually standard calculations in figuring radiant panel heating. The reason this was not done for this particular job is that these calculations are quite extensive and since the air flow through each panel is controlled by dampers, it is possible to obtain almost any result required to maintain the desired comfort condition. In all probability, calculations could be run on this job to determine the M.R.T., M.E.T., and the B.T.U. emission rate from each square foot of panel area if unusual conditions arise.

The building for which this warm air radiant panel heating system is designed is the Anicka Blueprint House No. 10, shown in the November issue of *American Builder*.

The heat losses indicated in the calculation sheet were based on the following construction. Exterior walls of $\frac{5}{8}$ -inch plywood, wood sheathing, 2x4 studs, gypsum lath, and plaster. The coefficient of heat transfer for this type of construction is .25 B.T.U. The coefficient of 1.13 B.T.U. was used for single glass windows and doors. The infiltration coefficient of .72 B.T.U. for windows and 1.42 B.T.U. for doors was based on between average and poorly fitted, without weather stripping or storm sash. The coefficient of .10 B.T.U. was figured for the ceiling, based on a construction of gypsum lath and plaster with a 2-inch mineral wool insulating blanket. There was no downward heat loss calculated from the panel, as the downward heat loss is negligible once the panel has been brought up to temperature. It will also be noted that there is an insulating strip indicated inside the footing and entirely around the perimeter of the building. The insulating strip prevents heat loss from the end of the slab. It has been found in floor installations of radiant panel heating that heat loss off the end of the slab is large, if no provision is made for stopping it. Therefore, the 1-inch insulating board is installed before the radiant panel, and that this insulating board extend at least 6 inches below the radiant panel and the supply ducts as well as finishing flush with the top of the panel surface.



Model Low Cost Home Attracts Thousands

AN estimated 75,000 spectators, many of whom had to stand in line, came to see the many exhibits of the Louisiana state-wide Housing Exposition that was sponsored by the Low Cost Housing Research of the College of Engineering, Louisiana State University.

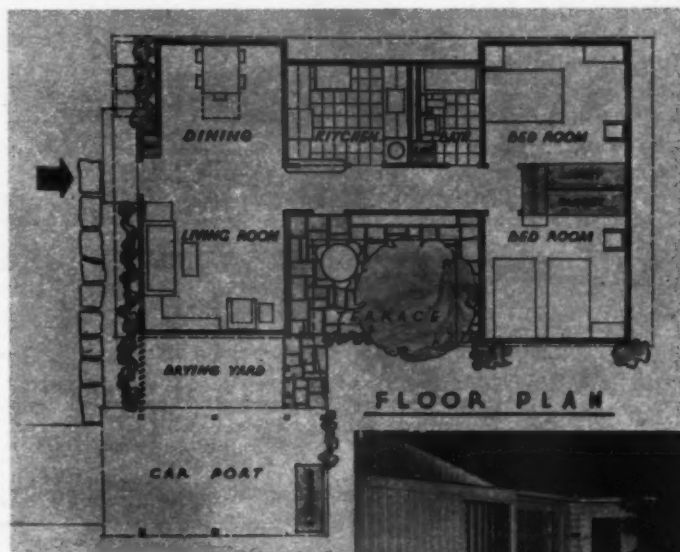
The huge Coliseum was the scene of this Housing Show, which was open for five days from November 19 to November 23, 1947.

Most attention was focused on the five-room modern home complete with patio and attached carport that was designed by O. J. Baker, director of Low Cost Housing Research and who was in charge of the exposition. The Crawford Co. of Baton Rouge built this home inside the Coliseum; and it was completely built,

furnished, equipped, and landscaped in five days.

Emphasizing flexibility and expansibility, the features of the U-shaped house that attracted most attention were the carport with storage for garden tools and equipment; the breakfast bar; private patio; and storage walls in the bedrooms and the hall.

The estimated price for this house, which includes a concrete slab for house, patio and carport, is a little over \$5,000. There are 768 square feet of interior floor space in this house. Built-up roof trusses are used throughout. The interior walls are of plywood, some of which are painted and some with the natural wood finish. The ceiling is made of Celotex panels 16x16-inch.



FLOOR plan of basementless two-bedroom model home shown above. A feature which attracted favorable reaction is privacy of rear patio





GOOD design plus a pleasing combination of conventional materials give this house high acceptance in the conservative east

Colonial Beauty in Ranch House Style

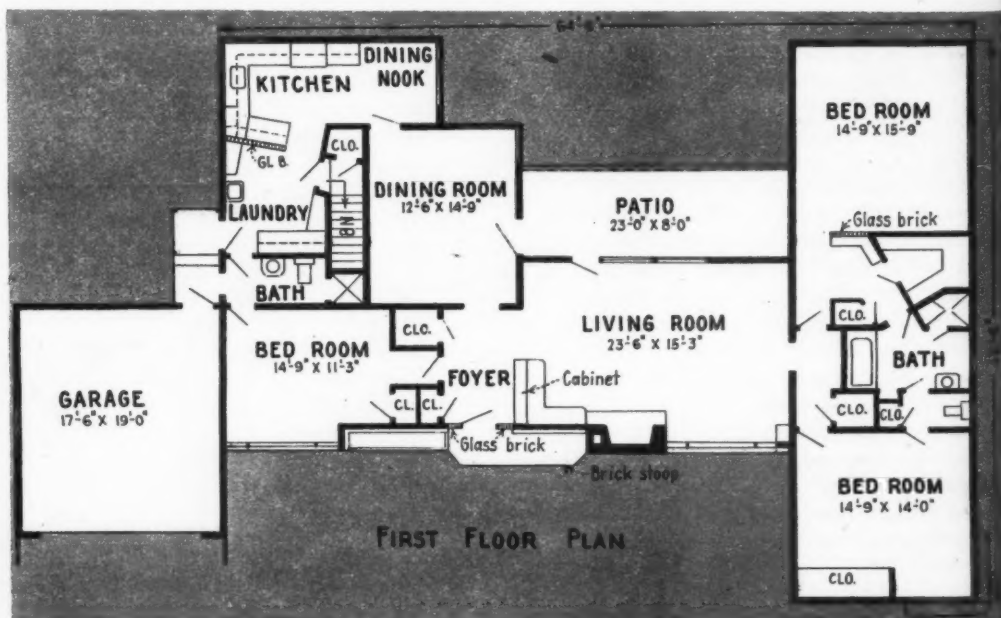
SITUATED on a lot slightly above street level, this long, low rambling house appears to have been always a part of the landscape. The pleasing lines are emphasized pleasantly by the clever use of shingle siding and stone in the correct proportions. By using stone for the middle portion of the house and the lighter-colored shingles for covering the garage and bedroom areas at the ends, the length and low, sweeping lines of the house are emphasized.

The low-pitch slate roof is broken sufficiently to remove monotony which is evident in many such houses now being built. Large, well-proportioned window areas

provide ample light and visibility. Metal sash were used throughout. The front lawn treatment here is also worthy of note. There is no sidewalk from the front entrance to the street, and a rustic fence from the garage to the projecting front bedroom makes it necessary to approach the entrance from the garage driveway. The four clumps of birch trees strategically placed on the spacious front lawn emphasize the inherent beauty of this suburban home.

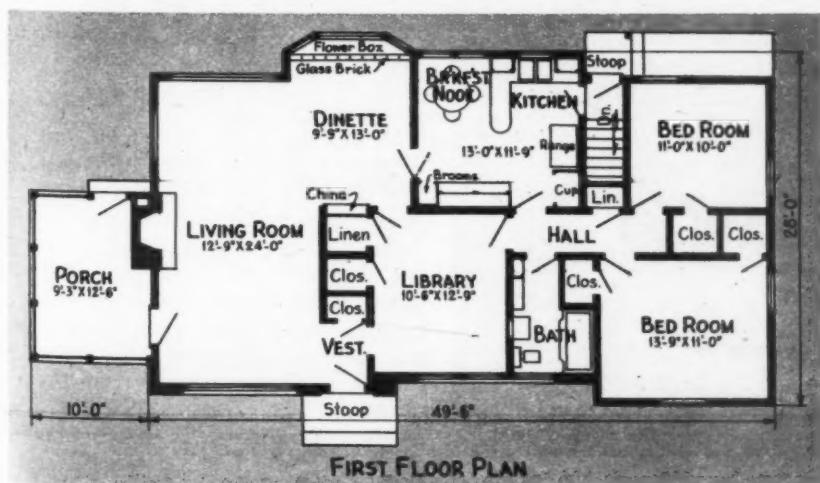
The house was designed by Porter O. Daniel of Newell & Daniel, home builders of Lake Success, Long Island, New York.

THE beauty and efficiency of the interior of this three-bedroom house are enhanced by setting walls at odd angles in several instances. This was done in the kitchen and in the master bathroom. The living room opens to a spacious patio enclosed on two sides by portions of the house thus assuring a maximum degree of privacy





THE outside of the house, with its interesting fenestration, presents a pleasing view to the street. Picture window in living room. Plan below



House with Neighborly Qualities

IN THE house for John Levin of St. Paul, Minn., the architect, Norman R. Johnson, has met the particular needs of his client, as relating to plan and design, and yet has successfully endeavored to blend the house in with the adjacent homes and surroundings.

A combination of stone and wood siding has been used for the exterior treatment. This, together with an interesting window fenestration, has resulted in a house that is pleasing in its entire concept.

The plan provides for six rooms and bath, with screened porch at one end and detached garage at the other. The library is situated so that, in an emergency, it can be used as a guest bedroom. The kitchen is extra large. Ample provision is made for normal family eating without the need of resorting to the dining room. Storage space is provided in the attic. This space is reached by means of a disappearing stair, located in the hall. The entire basement is excavated, permitting ample space for recreation as well as service.



HUGE plate glass windows, 16 feet in height from floor to ceiling, surround the spacious automobile display room

Auto Sales and Service— *Built to Client's Specifications*

THIS beautiful, practical, sales and service building was designed by J. Howell Smith, vice president and general manager of Foothill Motors of Pasadena, Calif., Lincoln and Mercury dealer. Years of experience in a previous location had given Mr. Smith definite ideas as to what the public wanted and what his organization needed in the way of quarters and equipment, so he engaged a dependable contractor, Z. B. Barker & Son of Pasadena, and worked out his ideas with him.

The entire site, including parking

space, covers approximately an acre of ground. The building itself covers about 18,000 square feet. It was completed in 5½ months and is one of the finest automobile sales and service agencies in California.

From an appearance standpoint, the outstanding feature of the building is the huge show-case type display room, with its plate glass windows, rising 16 feet from floor to ceiling and rounding the corner so that cars are visible from several hundred feet in either direction. At night this display room is lighted

by sixteen 12-inch square flush lights and eight flood lights. The floor of the showroom is terrazzo. The ceiling is treated with acoustical plaster. The tower is floodlighted.

The customers' lounge is a dream of beauty and comfort. Wide, soft, leather furniture; writing desk; telephone; large rest rooms; paging speaker—these are its features, enhanced by a planting space built up with Roman brick. Nothing was overlooked to please and to satisfy.

But Mr. Smith's proudest boast is the efficiency of his layout and the completeness of his facilities for servicing cars. The shop is flanked by service lots on two sides, with the main entrance in front, thus giving easy accessibility and egress. Every effort has been made to keep it free from congestion and to keep it clean and quiet.

A loading dock for parts and accessories permits unloading without the truck going into the shop. A hoist takes bulk parts to the second floor. A bulkhead across the building separates the painting and metal department from the rest of the repair shop. The paint booth is a completely dust proof room in which the air is changed three times every minute. The steam cleaning and washing department is also housed in a separate unit. The air-compressor is likewise in a room apart from the



THE MODERN sales counter for the parts department adds dignity and refinement



Auto dealer used ideas gained from practical experience in designing new sales and service center to get maximum efficiency in operation

other departments. Thus all of the departments which might contribute noise, odors, confusion, or undue traffic to the main service floor are kept separate from it.

The manager of the service department has his desk in the cashier's cage, which is completely enclosed with glass. This enables him to keep the entire floor under observation. Free use of skylights in the roof over the service area makes artificial lighting unnecessary on clear days.

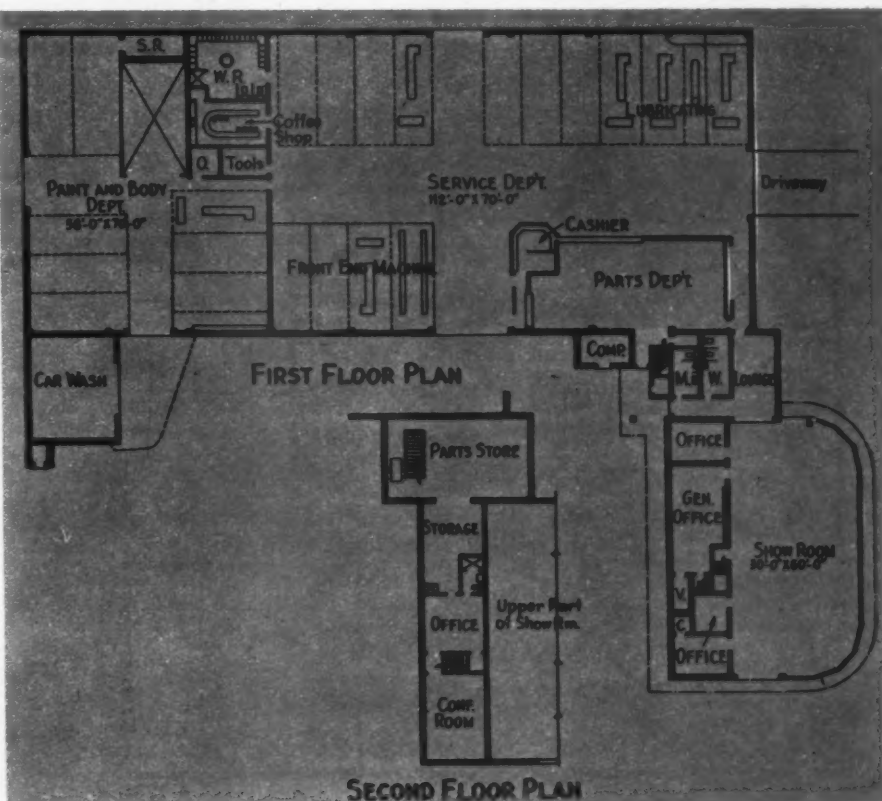
With all the thought and attention given to features calculated to draw in and satisfy the public, Mr. Smith did not forget the interests of the workers in the plant. Mechanics have spacious locker rooms and rest rooms, including shower facilities. The offices are equipped with modern desks, adequate lighting and cross ventilation. But the most unusual innovation is the coffee bar, where all employees are served coffee and donuts in the morning and afternoon.

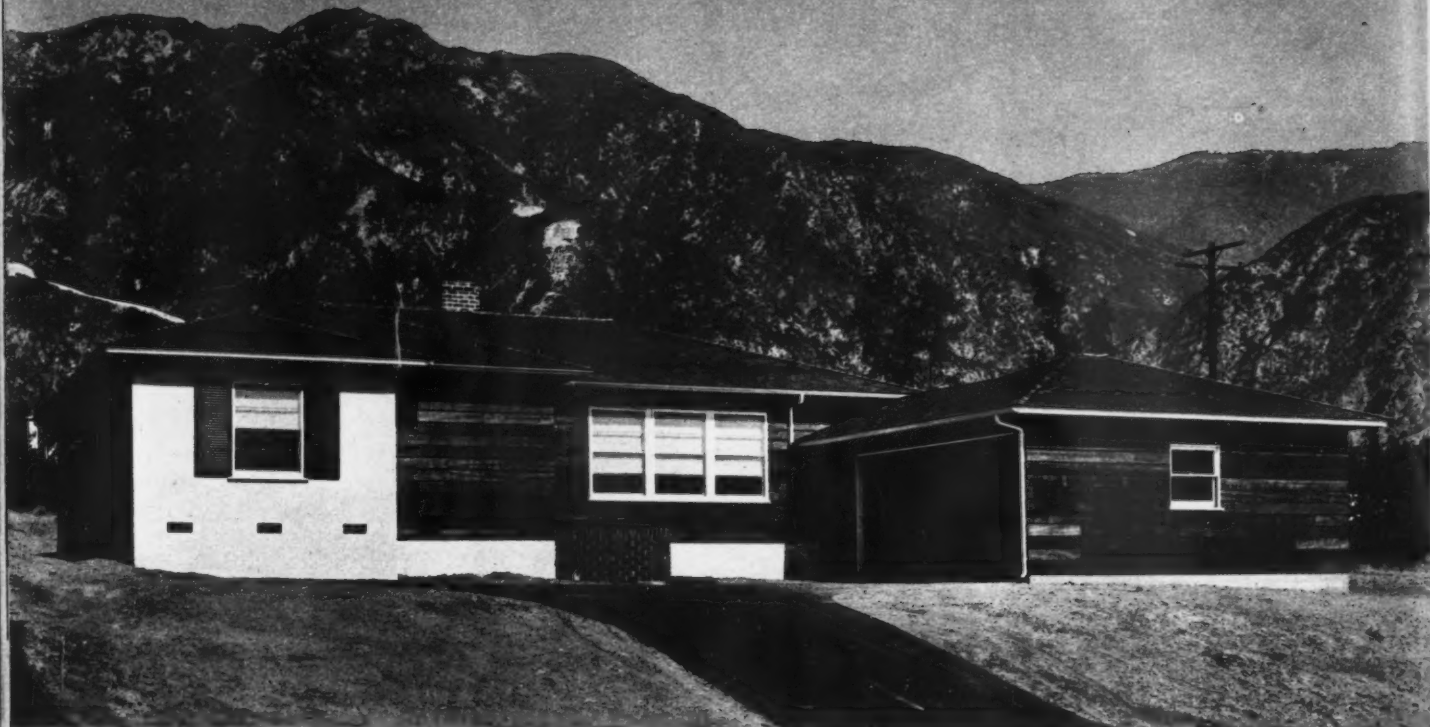
The second story has a large room for sales and meeting purposes, and a private office for Mr. Smith.

THE FLOOR plan of this garage is designed to eliminate much of the confusion, dirt, unpleasant odor and noise so prevalent in such establishments. The paint and body shop, as well as the car washroom, are entirely separated from the balance of the garage area used by employees and clients.



A CUSTOMER'S lounge embodies comforts not usually found in automobile salesrooms

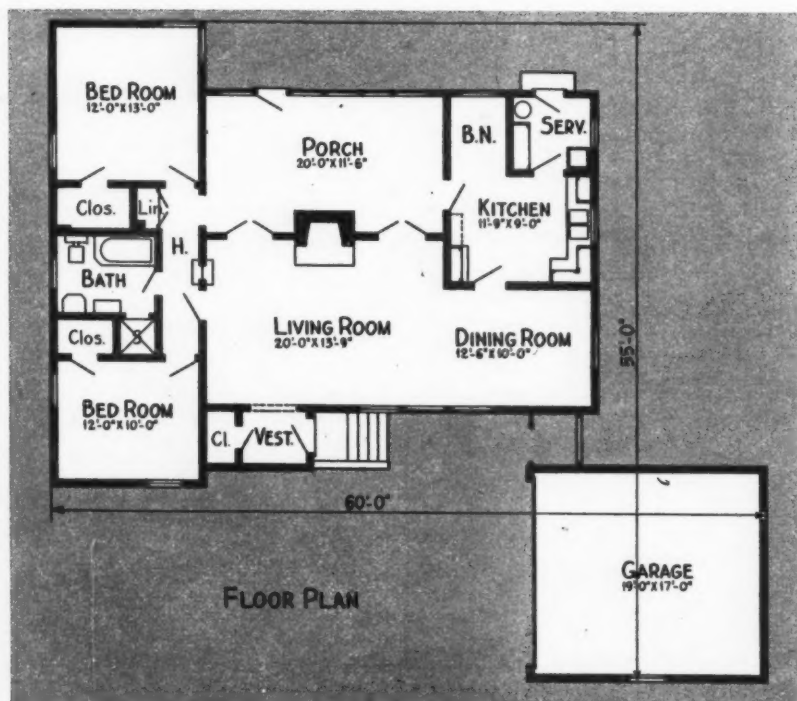




THIS house containing 1,433 square feet, was built for \$12,000 including the concrete driveway. Floor plan is below

Built in 59 Days

Quality, plus speed, plus fair prices bring satisfied home buyers and large increase in business for Contractor Carl R. Bryan of Pasadena, Calif.



CARL BRYAN turned out the house pictured above in just 59 days, total elapsed time, including Saturdays and Sundays. The owner was delighted with the speed, the work and the cost. Consequently, he is a Bryan booster.

If the above was an unusual case there would be nothing to write about. But all of the Bryan jobs this year were completed within 90 consecutive days and all of the owners were completely satisfied both with the work and cost. That's why they are sending their friends to Bryan.

As every builder knows, building on contract is no cinch in any of its stages, but perhaps the most exasperating period is after the house is finished, and the owner is requested to go to the bank to sign the completion certificate. Then is when he gets out his magnifying glass and hunts high and low for flaws. Then is when he refuses to authorize the

final payment until certain impossible conditions have been met, and the builder has to practically drag him to the bank and hold a club over him until he signs. Every builder has had this experience, and, of course, the officers of the banks are used to it and treat it more or less lightly.

But when a builder completes his jobs without a single important complaint—when all of the owners without exception voluntarily go to the bank and sign their completion certificates with nothing but praise for the builder, then the officers of the bank or building and loan company sit up and take notice. This is the record that Bryan has achieved.

How does Carl Bryan get his houses built in 2½ months or less? His answer is—organization—coordination—and to some extent—standardization. But perhaps the most important thing is simply that he decided to do it, and scheduled a house to be completed every two days. He insisted that his organization and his sub-contractors meet this schedule. It is a lot tougher to do it that way. There is no time to be lost between trades or waiting for materials or inspections. Bryan finds, however, that it keeps his organization on its toes. When he tells a subcontractor that he'll be ready for him on a certain date, the subcontractor knows that the job will be ready, and that he has got to get in and get his work done, or he will hold up the next trade. They know that Bryan means business when he sets dates.

It may be asked, "Where does he get this magic power over subcontractors? They have been known to be pretty independent of late." The answer is twofold. They like his methods—and he pays right now. As his painting contractor expressed it, "I can make money on Bryan's jobs because he doesn't call me until he is ready, and I can then get my work done without being handicapped by the presence of other trades." He does not quibble with his subcontractors; on many jobs he does not ask for estimates. This does not mean, however, that he is careless about costs; on the contrary, every one of the subcontractors knows that Bryan can figure just about what the work should run, and that he doesn't expect to pay any more.

The matter of prompt pay is of tremendous importance. Some of the smaller subcontractors operate on a "shoestring," and unless they get their money quickly, they are unable to pay for materials and labor. Bryan pays the day the job is finished, if the subcontractor needs the money.

Standardization plays an impor-

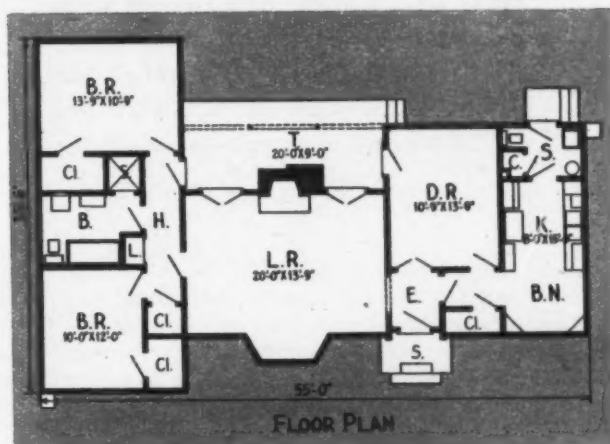
THE secret of low cost for Bryan on houses of this type is to keep design as simple as possible, employ a good top-notch carpenter crew and make it easy for subcontractors to complete their part of the work

tant part in speed and economy. Bryan does not hesitate to turn down jobs, if he thinks they are too "fussy." Whenever he does take a contract for an extreme house with new type materials, and new finishes, he knows that his regular crews cannot handle it as fast as conventional houses. Consequently, he prices and times it accordingly. He does not care for these jobs and never goes out of his way to get one.

In spite of the fact that his quotations on houses are generally considerably under those of many other builders in the same bracket of quality, Bryan makes a fair profit. A competitor recently tried to find out how he can make money at the prices he quotes, and he compiled a list of the subcontractors Bryan uses, think-

ing that perhaps they were second-raters. He found that without exception they were among the best in Pasadena. The secret seems to be that Bryan keeps his jobs simple. Bryan also has a top-notch carpenter crew. He makes it easy for his subcontractors by clearing the way for their work; he pushes the jobs through, keeping down overhead at the same time.

Another very important factor in his speed and economy is Bryan's thorough knowledge of the building game. As a boy, he worked in logging camps and sawmills in Canada. He came to California 27 years ago, as a carpenter, and since then has handled every phase of building, including heavy construction during the war.



ANOTHER house typical of those turned out by the Bryan organization at minimum cost

Close Supervision, Careful Checking Cuts Building Costs

Mass production of housing with emphasis on labor efficiency and adherence to production schedules saves \$2,000 to \$2,500 per house for this builder



STRICT supervision throughout construction progress permits the

CLOSE supervision of labor on the site, with emphasis on speedy erection of quality houses has paid well in construction cost savings for The Berne Company of Jamaica, N.Y. During the last year in the Merrick Crest development, Gus Berne and his organization have been selling the houses illustrated on these pages for \$9,990 and \$10,490—houses which are the equivalent of practically everything being produced in that neighborhood for \$12,500 or more.

The answer to cost-reduction accomplishments of this firm lies in systematic organization of crews and especially close supervision of men on the job. First of all, gangs are carefully organized so that men will be best able to give maximum output. A strict production schedule is adopted, and enough crews set up to deliver the houses wanted in the time limit set, with a construction superintendent for each 50 houses. Each

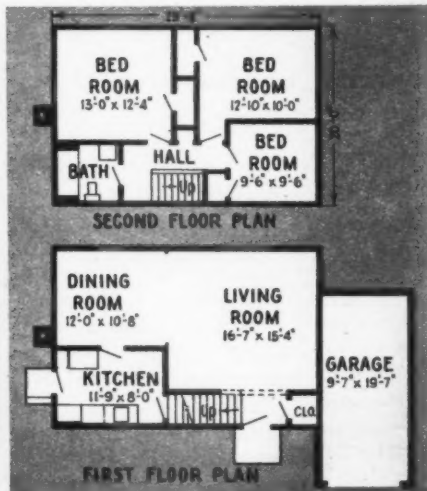
superintendent is not only paid very well (about \$150 a week), but he is also provided with an assistant superintendent and a night watchman. The night watchman for each 50 houses more than earns his salary by savings effected through elimination of damage to partially completed homes by vandals and also by the protection provided against thievery of materials and equipment.

Mass production of houses with emphasis on labor efficiency calls for a simple yet thorough checking system on progress. The Berne Company has worked out a series of charts and forms which record every detail of progress on a house covering 118 points ranging from the check mark that a building permit has been obtained for the house to point No. 118 which is set up to list any complaints that might be made by the home purchaser.

With each operation having a

number, a master progress chart carrying the number of each house job is set up in the main office. Each superintendent, foreman or department head is required to file a "Daily Construction Report" on jobs under their supervision, with each operation completed that day numbered and ready for transfer to the master chart. A quick glance at the master chart in the main office by the firm's management officials, construction superintendents or others concerned provides immediate information as to the exact progress or construction status of any of the 500-odd houses being built. Delays in any particular type of work or failure of some supplier to make promised deliveries of materials or equipment show up immediately. The master chart also reveals any weaknesses in crews or individuals who fail to keep up to their assigned work quotas.

The savings effected by this type



TYPICAL exterior and plan in Merrick Crest



sale of these houses for \$9,990 and \$10,490

of supervision on a 500-house project are broken down and estimated by The Berne Company as follows: A saving of \$100 to \$150 per house because of good superintendents and watchmen. Because of faster erection with conventional methods, a saving on interest charges of about \$75 per house is realized. Because of the low prices at which the houses are selling, sales and advertising expense is not necessary, saving from \$400 to \$425 per house. Legal and miscellaneous savings amount to about \$125 per house, and profit is cut an average of \$750 per house. The total savings on subcontractor prices on each house has been running from \$750 to \$1,000 because of close cooperation with the subcontractors plus assurance by The Berne Company that they will provide steady work for the subcontractors who cooperate with them on their production schedules and cost cutting efforts.

The houses in this operation are conventional two-story basic Colonials with exterior finishes and elevations varied to remove monotony. Interior walls are plastered over gypsum lath and floors are prefinished hardwood. Bathrooms are tiled and equipped with Briggs fixtures. Heat is supplied by an oil-fired, automatically controlled, forced warm air heating unit. Water piping is copper, and an automatic gas-fired hot water heater is standard equipment. A standard-sized gas range is also included in the purchase price.

EACH operation on a house is numbered as shown in the list at right. When the various operations are completed they are recorded by number on a master progress chart in the main office. Thus the exact status and progress of every house under construction is known from day to day



FOR each 50 houses this firm has two building superintendents and a night watchman

LIST OF ITEMS FOR CHECKING ON MASTER PROGRESS CHART

- | | | |
|---------------------------------------|--|---|
| 1. Building Permit Number | 39. Garage rafters | 80. Prime ext. woodwork |
| 2. FHA Number | 40. Garage sheathed | 81. Install ext. hardware |
| 3. Elevation | 41. Garage roof | 82. Standing trim |
| 4. Plot stakes | 42. Int. water pipe | 83. Hanging trim |
| 5. Excavation | 43. Int. gas pipe | 84. Install registers |
| 6. Footing dug—Application | 44. 2nd insp. FHA | 85. Connect burner controls |
| 1st insp. of bldg. dept. | 45. Bldg. dept. 2nd insp. | 86. Switches and receptacles |
| 7. 1st insp. FHA | 46. Ext. finish—Elevation | 87. Electric fixtures |
| 8. Bldg. dept. 1st insp. | 47. Stucco | 88. Patch |
| 9. Foundation | 48. Siding | 89. Stair finish—main basement |
| 10. Column footings | 49. Asbestos shingle | 90. Interior prime—paint |
| 11. Dampproofing—Application | 50. Wood shingle | 91. Interior finish—paint |
| 1st alt. insp. | 51. Gutters | 92. Install interior hardware |
| 12. First alt. insp. | 52. Leaders | 93. Lay hardwood flooring |
| 13. Back fill | 53. Cellar bottom | 94. Lay kitchen panel |
| 14. Lally column and steel girder | 54. Set furnace | 95. Linoleum |
| 15. 1st tier beams | 55. Set burner and oil tank | 96. Set range |
| 16. 2nd tier beams | 56. Lath | 97. Finish exterior paint |
| 17. Rafters | 57. Scratch and brown plaster | 98. Set curb stakes |
| 18. Entrance door frames | 58. White plaster | 99. Curb and walk forms—check by surveyor |
| 19. Window frames | 59. Wire lath garage | 100. Curb |
| 20. Roof sheathing | 60. Garage plaster | 101. Sidewalk |
| 21. Cornice | 61. Cesspool | 102. Garage floor |
| 22. Roofing | 62. Connect drain to cesspool | 103. Flagstone walk—front to drive |
| 23. House sheathing | 63. Health dept. insp. | 104. Gravel drive |
| 24. Main stairs | 64. Bldg. dept. insp. | 105. Walk to rear or side door |
| 25. Basement stairs | 65. Gas main to house | 106. Hang garage door |
| 26. Ducts | 66. Electric service to house | 107. Garage hardware |
| 27. Rough plumbing | 67. Water service to house | 108. Terracing—rough grading |
| 28. Rough electric (including garage) | 68. Install gas meter | 109. Top soil |
| 29. Roof insulation | 69. Install electric meter | 110. Finish grade |
| 30. Wall insulation | 70. Set tub | 111. Seeding |
| 31. Blocking out | 71. Set tile | 112. Landscaping |
| 32. Deafening | 72. Set kitchen cabinets | 113. Final inspection—FHA |
| 33. Door bucks | 73. Set drain board | 114. CO |
| 34. Front steps | 74. Set bathroom fixtures—Connect kitchen sink | 115. Deposit |
| 35. Side steps | 75. Set medicine cabinet | 116. Contract |
| 36. Garage blocks | 76. Glaze window | 117. Title |
| 37. Chimney | 77. Caulking | 118. Complaints |
| 38. Brick veneer | 78. Weatherstripping | |
| | 79. Hang ext. doors | |

New Impact Tool For All Purposes

A NEW universal electric, all-purpose, impact tool has been developed by Ingersoll-Rand Company. Using standard attachments, the new tool will apply and remove nuts, drill, ream, tap, drive and remove screws, run wire brushes, do hole saw work, drill brick and masonry, and drive wood augers.



A HOLE in concrete can be drilled in seconds with a carbide-tipped drill

The new machine is designated as Size 4U. It weighs only 6½ pounds, has an overall length of 10½ inches, a free speed of 2,000 revolutions per minute and delivers 1,900 rotary impacts per minute under load. It is powered with a specially designed reversible, universal, electric motor that operates on 110 volts, AC-DC.

The impact tool runs just as any conventional electric tool until the resistance to spindle rotation reaches a certain amount. Then a patented mechanism converts the power of the motor into "rotary impacts."



SPECIAL nails space this mesh ¾-inch from backing so mortar will embed it completely

Wire for Reinforced Concrete Siding

A SPECIALLY-DESIGNED wire mesh for reinforcing concrete siding is becoming increasingly popular among builders. By using a new type of nail, the mesh is kept ¾-inch from the backing so that it is more than a base or a bond for the concrete. When properly applied with the special nails, the wire mesh is embedded in the concrete covering so that it acts as a reinforcing material as well as a bond.

The usual procedure is to apply 15-pound felt building paper over the sheathing. Then the galvanized reinforcing wire goes on, furred out ¼ to ⅜ of an inch away from the wall by the special furring nails. The first, or scratch coat of concrete siding covers the reinforcing mesh. While still wet, it is raked horizontally to provide maximum bond for the second coat of concrete. It is customary to apply a second coat about ⅜ of an inch in thickness before working the desired exterior finish into the

final surface covering of concrete.

The new wire permits correct flow of the aggregate around the reinforcing, which is smooth to the trowel in any direction. The mesh comes in rolls 150 feet long and 3 feet wide.

In addition to providing reinforcing

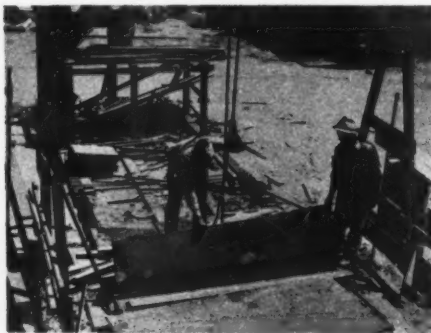


MESH is popular as base for Perma-Stone

ing for any desired finish of concrete siding, this mesh, developed by the Keystone Steel & Wire Co., also provides reinforcing for concrete siding with the new Perma-Stone finish.

Glazing Plywood Forms Increases Useful Life

A NEW method of saving concrete forms was recently tried and found successful at the Herbert Kettell Mayfair Park development in Chino, Calif. The 48 houses of Pumacrete were poured in 48 days. One of the practices introduced there



PLYWOOD being dipped into Plastiglaze vat

which proved economical and saved the forms was the dipping of each form in a new plastic solution called Plastiglaze, manufactured by the Calresin Corp., Culver City, Calif.

Plastiglaze is impervious to water and mild acids. It leaves a glossy finish on the form and penetrates the fiber to strengthen the wood. The end result is a thin colorless coating which does not chip or peel. On the Mayfair Park job, ordinary plywood was used for the forms. They were dipped into a vat of Plastiglaze and then put together with metal bands as final preparation for pouring.

After each form was used, it was stripped of concrete by scraping and brushing. A thin layer of form oil prepared the form for the next use. Each form was used 25 times.



POURED concrete houses in Mayfair project



CONCRETE being poured into treated forms

Private Builder Vanishes in Europe

Says Frank W. Cortright

Executive Vice President NAHB

Mr. Cortright recently returned from a three weeks' tour of England, France and the Scandinavian countries where he studied housing conditions and the housing industry there, as it is today. This is the first of several reports revealing his conclusions on the situation in Europe

THE Four Freedoms are a thing of the past in Europe.

Beginning of their complete elimination and destruction came when theorists, left wingers and fellow-travelers, finding the housing industry easiest to attack took it over lock, stock and barrel from private industry. They started a free people down the chute to the throttling of all private enterprise construction—a joy ride that must never happen here!

I saw this happen in Europe. I saw it in its naked ugliness on a recent inspection tour of six European nations. In England and in France, as in other nations, no one builds homes anymore except the government. Socialists and Communists have stripped the private builder of his freedom to build decent homes for free people. There is no "Freedom from Want" of adequate housing in the two countries mentioned, and housing conditions in Belgium, Holland, Denmark and Sweden are almost as depressing. The other three "Freedoms" have become forgotten "good intentions," even if they actually ever existed in fact.

Controls Wiped Out Private Building and Home Ownership

Experience demonstrates that those who wish to stamp out free enterprise invariably strike first at the home, bulwark of a free, prosperous nation. When homes fall to the public housers, other government controls are but a pace away. England and France, as the other countries visited, saw construction and rent controls as far back as World War I. These controls flourish today, expanded and amplified, along with subsidized housing.

The European inspection tour proved that housing, food and fuel are today's most pressing needs. The full extent of the European housing need is so great that it is beyond the comprehension of anyone who has not personally observed the shocking spectacle of three, four and even five families living in one house.

Thus, it is particularly unfortunate that housing has become an instrument of European politics and as such is not being produced to any appreciable amount. Briefly, these are the conditions shown to exist by our European survey:

1. Private enterprise has been almost entirely liquidated because of the breakdown of their capitalistic system. Control of all new construction is vested in the state.

2. This is a direct result of 30 years of rent-control, government interven-

tion and competition. Home builders as we know them in the United States, have been eliminated. Millions of homeless people have all but lost hope of ever regaining a semblance of decent living accommodations.

3. Examination of these controls show they were instituted during periods of emergency, and while sometimes relaxed, were never completely eliminated. Liberalism led to Socialism and that in turn to Communism. The result has been that even in England, last European fortress of democracy, powerful government factors are determined to nationalize the land and make the whole nation tenants of the state.

4. Beyond this, an extremely low labor productivity, rationing of all necessities of life and stringent government regulations have engendered a postwar malaise from which it would appear the people stand small chance of recovering.

5. Proponents of such socialized proposals as the Taft-Ellender-Wagner public housing bill would do well to see the emasculation and final destruction of healthy, home building industries in these European countries.

Housing Under Government Direction Proves Expensive

Perhaps the greatest blow to private enterprise came in England when Aneurin Bevan, leftist Minister of Health, issued the order completely eliminating the private builder. Up to that time, the British government had been permitting the private-builder to build one private house for sale for every four houses built by local public housing authorities and owned by them. Even though the government staked out four-fifths of the operation for itself, private builders under license constructed 45,520 homes, while the local housing authorities were able to build only 54,250 units in the same period. Then came Bevan's cancellation order last August and from now on, every home in England will be built and owned by the government.

The situation poses an interesting problem. How a nation already verging on financial bankruptcy can hope

to finance by the public treasury the hundreds of thousands of homes so vitally needed is quite a mystery. Houses it is building are not cheap. The flimsy prefabricated structures and the heavy masonry homes, it is putting up between are costing English taxpayers \$6,000 and \$8,000.

"Modern" English Houses Are Not Modern

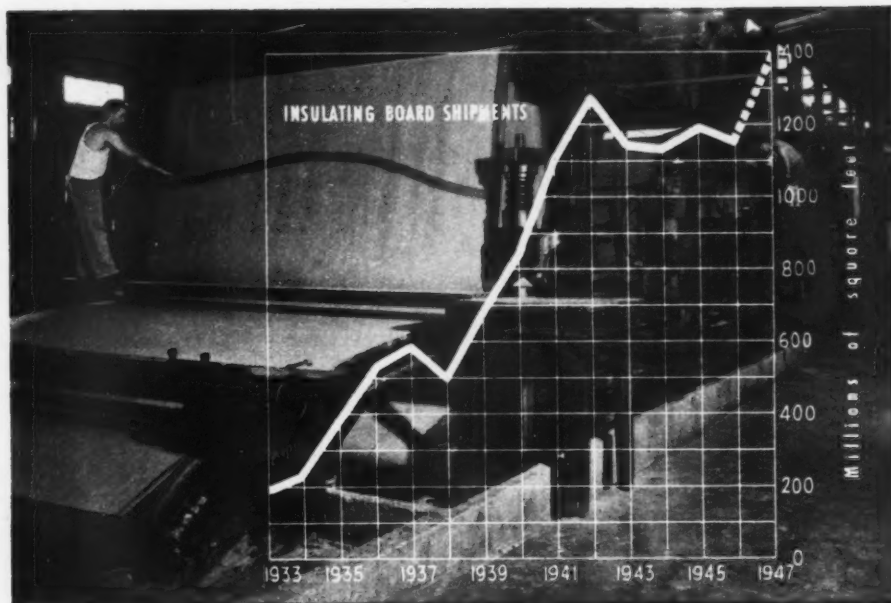
Another serious portent for contractor-builders still struggling to stay in business is the number of "direct labor" jobs being started by which the staff of the local housing authority employs labor direct, eliminating all contractors.

Sadder still, homes being offered the British people would have a hard time finding acceptance on the American market. The new English homes would take Americans back 30 years or more. The modern bathrooms, kitchens, fittings and fixtures going into new English houses are the equivalent of what we put into houses built about 1910. The regimented rows of public housing units are uniformly unattractive in design, and lack minimum heating facilities and what we consider elementary comforts.

All these countries, of course, have struggled with the ravages of war and bomb destruction. One of the greatest tasks has been to clear away the rubble and fill bomb craters. In France alone, 63,840,000 cubic yards of rubble, stone and brick had to be moved; 971,000 acres had to be cleared of mines, and 616 individual towns cleaned up. They had 56,570 cubic yards of bomb craters to fill. Then, too, structures that were only partially demolished, but susceptible to restoration, had to be repaired.

Throughout Europe today there are but two types of construction, that performed by the struggling large contractors who are still fighting to keep a toehold, and that done by the very small operators who paint, and do carpentry and repair work. He will add a room to your house or build you a barn, but as a housing contractor, he is out of business. Even in England, about 90 per cent of the men who used to build from five to 30 houses a year are now working in the large industrial plants. Labor generally is getting double the pay it did before the war, is producing about half as much, and is unable to buy anything with the money it does make.

Add all of these factors to the stark scarcities in building material, and the housing outlook for Europe is gloomy.



RECORD of insulating board shipments to distributors in millions of square feet

Infant Industry Matures

In the last 35 years America's native inventive genius has developed a major building material from raw materials never previously used for construction purposes. Without this new product—insulating board—home construction volume could not have attained present proportions

JUST a third of a century old, America's insulating board industry has taken its place among the major producers of building materials. During the last year, shipments of insulating board reached an all-time record high of approximately one billion, four hundred million square feet.

This figure, arrived at by projecting the shipment figures for the first nine months of 1947 over the final quarter, takes into consideration only the material shipped by members of the Insulation Board Institute into the regular channels. It does not include board which was further processed into other building products or used in industrial applications.

Shipment figures dating back to 1933, made public by the Institute for the first time, tell the story of the dramatic growth of a new American industry. They show, too, how native inventive genius has augmented the country's building material resources. In the past ten years, more than eleven billion square feet of insulating board have been channeled into the nation's construction program. All of it was produced from raw materials not previously used for building purposes.

Insulating board shipments, the

figures disclose, are now at an annual rate seven times that of 1933. In general, the growth of the industry has been steady and rapid. Only wartime difficulties in expansion kept the output from going even higher. New plants and improvements begun since the war, some are now completed and others well under way, eventually will boost the potential production capacity to well over the two billion square foot mark, according to pre-



UNLOADING cane for use in manufacturing insulating board. Wood fiber is also used

dictions from most industry sources.

Increased shipments of all types of insulating board products are reflected in the 1947 figures. Insulating building board in the half-inch thickness, which, in addition to being a decorative interior wall-finishing material, has hundreds of utility uses, continues to account for the major portion of the output. Outstanding gains, however, were made in the shipments of sheathing and lath, materials widely used in residential construction.

The increased production of insulating board sheathing has been particularly welcomed by builders. When insulating board was introduced in 1914, its first important use was as a sheathing material. It was not until the middle 1930's, however, that an insulating board specifically designed for sheathing was brought out. Because it was both a structural material and an insulation, it immediately became popular. Today it plays a major roll in the sheathing market.

Insulating board lath, a product specifically designed for use as a plaster base, was developed in 1930. Shipments of this product, manufacturers report, have increased several times in the period since the end of the war.

Decorative insulating boards, in tile and plank shapes, continue to make up a considerable part of the output. The demand for tileboards, which are ideally suited for ceilings, is running particularly high. While a much higher percentage of the industry's production goes into sheathing and lath than into the decorative specialties, the latter are more in evidence because they are not concealed under other materials.

In addition to their uses as sheathing and lath, insulating board products today are being utilized in a number of new ways in both new construction and remodeling. For instance, insulating building board has been found helpful in preventing heat waste in radiant heating installations. For this purpose, the board is cut into strips, which are placed under the heating pipes in the concrete slabs. The board retards the loss of heat through the under side of the floor, thus directing more of it into the heated area.

Another new use of insulating board in masonry construction is as an insulation between the foundation wall and the concrete floor slab. The board also has been found valuable as both an insulation and a sound deadener when used under a subfloor or between the subfloor and finished floor.

With the new emphasis now being

placed on good acoustics, insulating board frequently is placed between double partition walls to act as a barrier to sound transmission. Tests also have shown that a good measure of sound quieting is achieved when insulating board lath is used as the base for plaster on interior walls.

While one of the standard reasons for using insulating board in various types of construction is to reduce heat losses, several new uses for the product have been developed in connection with heating and ventilating. Cold air returns, for example, can be made more effective when insulating board is used against the inside of the sheathing and in back of the returns. Radiators recessed into outside walls are likely to lose much of their heat to the outdoors unless the reduced thickness of the walls is compensated for, and this can be done by backing up the radiators with insulating board.

Insulating board roof insulation has long been used in commercial and industrial roofing. The trend to flat roof decks in some types of modern residences has extended the use of the material to that field. Here it is placed under built-up roofing in the conventional manner.

The utilization of older buildings to alleviate the shortage of housing has greatly expanded the use of decorative insulating board in remodeling. When these old buildings are converted into apartments, the ceilings frequently are much too high for the new room dimensions. False ceilings are easily installed through the use of insulating tileboards.

Within the past decade, agriculture has come to realize the economic benefits to be derived from the insulation of animal shelters and



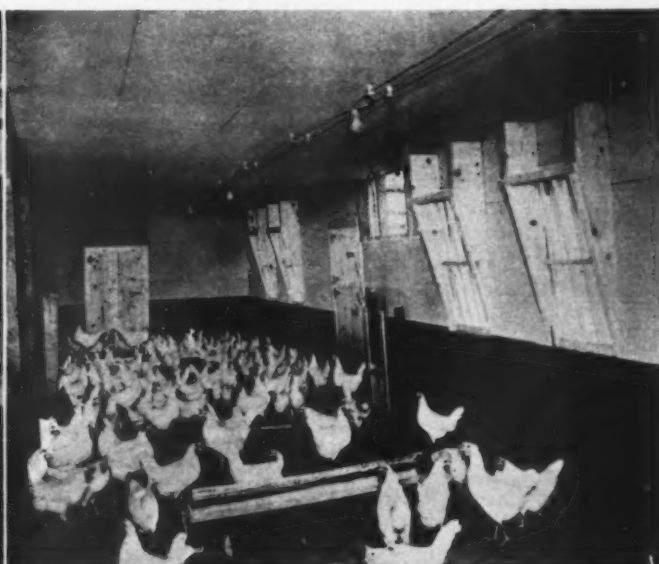
MAJOR portion of the industry's output continues to be insulating building board in the half-inch thickness, used primarily as a decorative interior wall finish

storage buildings. This has opened up a vast market for the sale of insulating board products. Because they are a structural material as well as an insulation, these products are in great demand for all types of farm building.

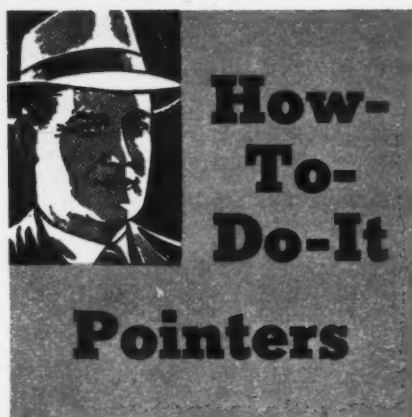
Impetus to this trend has been given by recent studies conducted by farm authorities. Iowa State College, for instance, recently reported that its demonstration flock records showed that hens housed in insulated shelters last winter laid 16 more eggs per bird, and at a saving of a pound of feed per dozen eggs. The income per hen was 69 cents more when the poultry houses were insulated. These field tests, the college reported, indicate the definite advantages in using insulation.



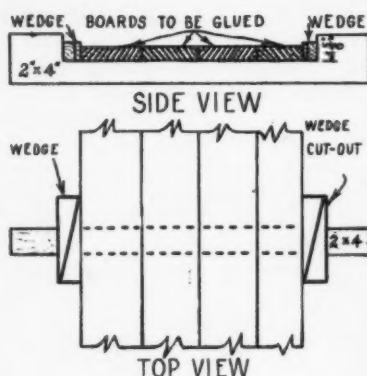
Insulating board lath was developed in 1930



THE increased output of insulating board sheathing has speeded building. Insulation board also has many uses on farms

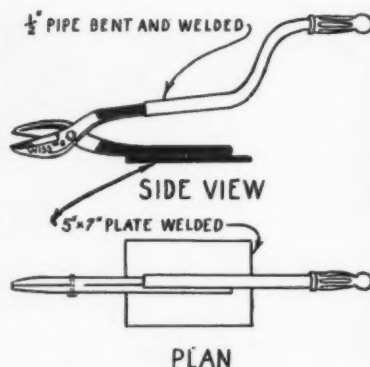


How to Make Clamp For Gluing



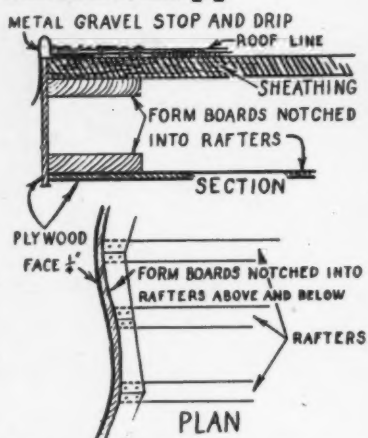
W. L. DODDS, Star City, Ark., submits this suggestion for making a clamp to glue together a group of boards of random widths. The drawing above is self explanatory.

How to Make an Expanded Metal Shear



THIS powerful shear can be used to cut four sheets of expanded metal at once. To make: cut off handles of a large pair of shears. Weld a 5x7-inch plate on one handle, and 1/2-inch pipe on the other. Cement a rubber bicycle grip on pipe. J. G. CALDWELL, San Mateo, Calif.

How to Frame a Curved Canopy



GEORGE T. MANN, Fort Meyers, Fla., submits the suggestion indicated above, which he has used a number of times in connection with flat roof construction.

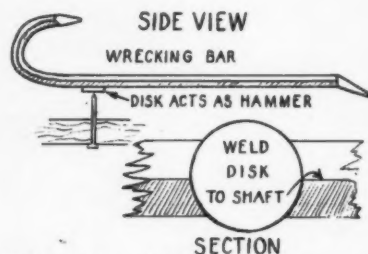
How to Straighten Crooked Studs



WILLIAM L. DODDS, Star City, Ark., suggests how to straighten crooked studs in a partition when sheet rock is to be applied directly to the studs.

A kerf is sawed approximately one-half way through the stud at mid-point of curve. Then, a tapered wedge is driven into the cut until the stud is straight. Saw off the portion of the wedge that protrudes.

How Wrecking Bar Serves as Hammer



TO obtain added service from a wrecking bar, FRANK J. KUEHN, Osseo, R.I., suggests that a steel disk be welded to the outside face of bar. It will thus serve as a hammer in an emergency.

AMERICAN B

Practical Suggestions For the Use of Bathroom Fixtures

R. J. Alexander

THE DRAWING reproduced on the opposite page is intended to be used as a reference plate for the draftsman or builder. It offers suggestions on plan layouts, technical information on sizes, as well as requirements of bathrooms and lavatories, and ideas helpful to those engaged in the planning or actual construction of bathrooms in small homes. In the arrangement of fixtures, consideration should be given to detail that will insure maximum convenience, economy of construction, and trouble-free operation.

Adequate backing for the installation of piping and the hanging of fixtures is important. Blocking should be of sound materials, cut square for accurate and rigid fitting, securely nailed to studs or joists. Care should be exercised in the installation of the rough plumbing pipes, so that load bearing members, such as joists and headers, are not cut to the extent that they would tend to weaken the structure. If considerable cutting of joists is found to be necessary, they should be reinforced, or additional joists should be installed.

Access doors should be placed in wall at the inlet end of the tub, to permit working on the pipes and fittings in the event that repairs are necessary. It is often possible to place the access door in closet walls.

The wall on which the water closet is placed, should be framed 2x6 or 2x4 studs with 2x2 furring strips nailed to end face of studs, in order to allow sufficient space in the wall for the hub or joint of the soil stack.

Careful planning and placing of the bathroom units in relation to the overall plan of the house will result in considerable savings in plumbing costs. If possible, bathrooms should be placed adjacent to, or directly above the kitchen. Where a first floor lavatory exists, the bathroom should be placed directly above it. Quite often it is possible to have the kitchen sink, lavatory and toilet of the bathroom back to back on the same wall. Location of laundry facilities and sewer connections are also governing factors.

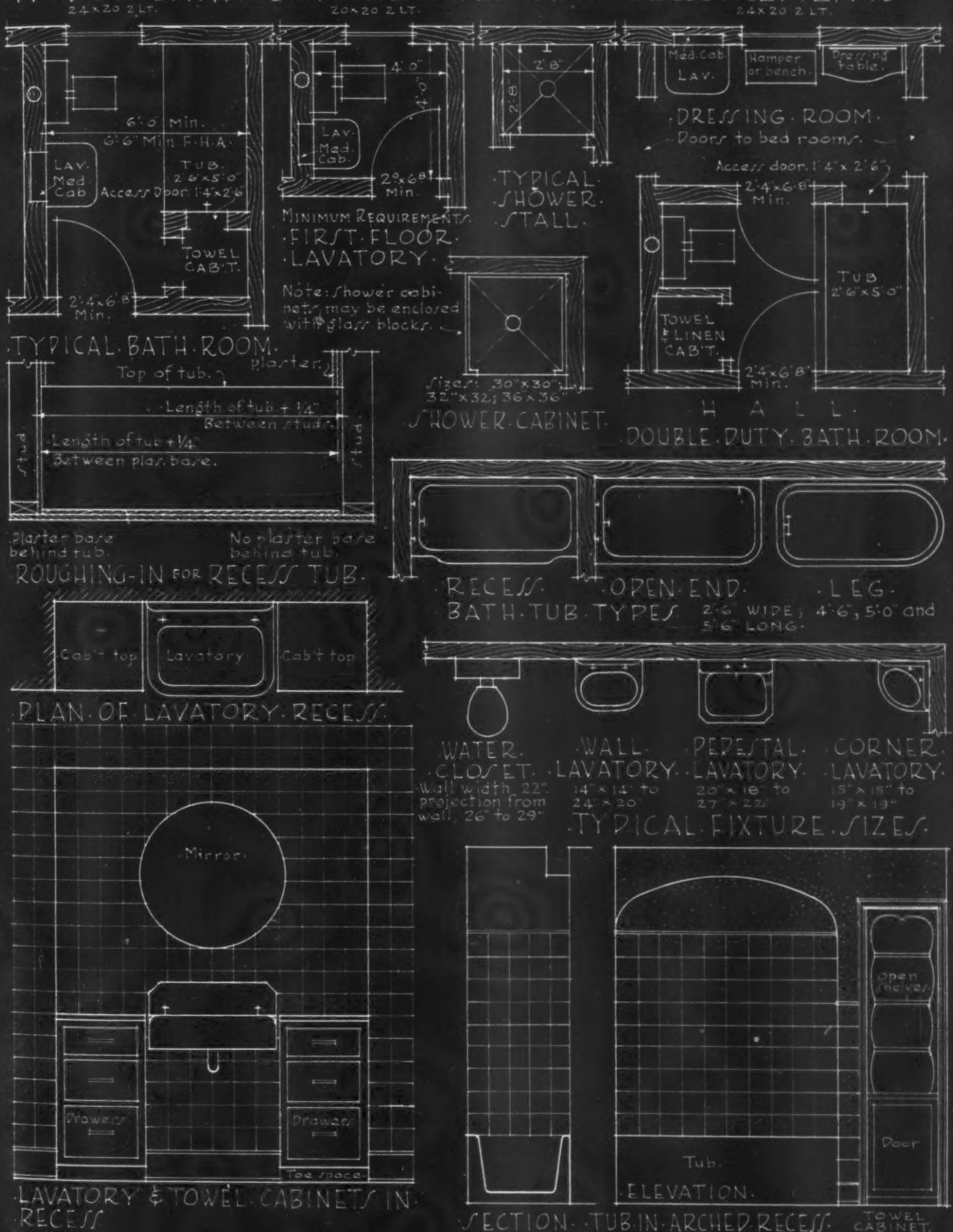
The location and the swing of doors should be considered before the fixtures are set in their final position. It is a good plan to mark the swing of a door on the rough floor with a heavy black pencil to assure clearance.

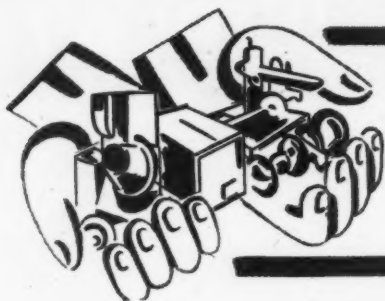
BUILDER'S BETTER DETAIL PLATE

American Builder, January 1948.

99

No. D.39. BATH ROOM DETAILS AND REQUIREMENTS.





NEW PRODUCTS

Offered by Manufacturers

PINT-SIZE FURNACE

AB1819

A pint-size oil furnace that heats a four to seven room house and can be adjusted to accommodate additional rooms is being produced by the Kalamazoo Stove & Furnace Co., Kalamazoo, Mich. The large heating capacity of the unit, which measures only 2-feet by 4-feet by 5-feet, is achieved through a unique design of

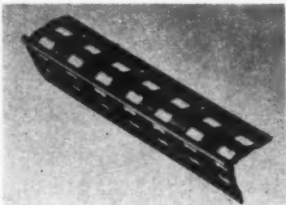


flue gas and air circulating passages. The complete heating unit is mounted above the blower so that heat is scrubbed from its bottom as well as its sides. The heating capacity can be increased by installing a new nozzle in the pressure atomizing gun type burner. Minneapolis Honeywell controls, room thermostat automatic draft stabilizer, and oil filter make the furnace operation completely automatic and ensure trouble free service.

CORNER BEAD

AB1820

A corner bead with a bonderized, electro-zinc galvanized coating that will not peel, chip, flake, or powder is made by The Bostwick Steel Lath Co., Niles, Ohio. The new finish, known as Electro-Gal, was devised to



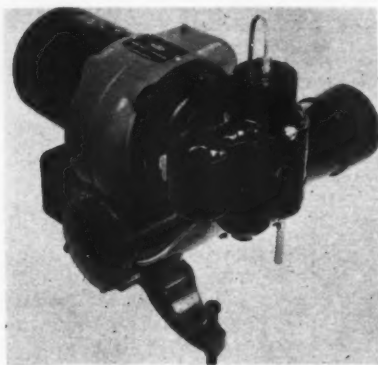
meet the storage of galvanized sheets. In the new process, the steel is electro-coated with zinc and bonderized. Bonderizing after the electro-coating operation converts the zinc galvanized surface into a finely crystalline, non-

metallic phosphate coating and an absorbent base for paint. Builders and architects are assured the nose of this new corner bead will be free of cracking, chipping and peeling after bending for arches and curved work. Its complete name is Bostwick Electro-Gal Truss-Wing Corner Bead. It is not a substitute for Bostwick's Truss-Wing bead with its high quality galvanized finish, but now Truss-Wing will also be available with electro-galvanized coating.

LOW PRESSURE BURNER

AB1818

A low-pressure conversion oil burner that will burn even the poorest oils with maximum efficiency and uses a minimum amount of fuel is manufactured by the U.S. Machine Corp., Lebanon, Ind. The oil is metered and pre-mixed with low pressure air to secure thorough atomization of the fuel before secondary air is added to



support combustion. The burner is self-cleaning, requires no filters and has only one adjustment—auxiliary air to fan. A newly-developed nozzle sprays a mixture of oil and air in a uniform cone through small openings which are large enough to preclude clogging with dirt. The simple design of the burner has eliminated numerous parts which might interfere with the unit's performance because of adjustment needs.

CONCRETE IMPROVER

AB1814

The addition of Portite, an easy-to-use liquid, to concrete, plaster, and lime-free mortar will result in a more easily workable mix that requires less time for placing and finishing than ordinary mix, and has unusually high strength and adhesive qualities. It is manufactured by Hopper Products Inc., 12 East 41st St., New York 17, N.Y. A non-contaminating, non-irritating and non-toxic product, it has been under test and in successful use for over five years on various types of

construction in a restricted Eastern locality. Besides the above, other advantages of Portite-improved aggregates are reduced shrinkage, with less need for expansion joints, and elimination of segregation and dusting.

COLORS IN OILS

AB1817

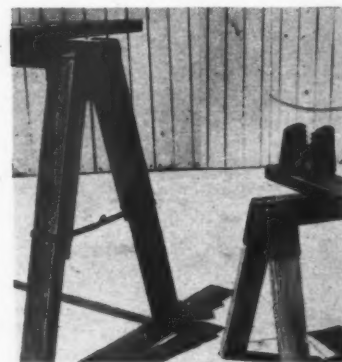
The Gillespie Varnish Co., 174 Day St., Jersey City 6, N.J., are now preparing the Gillespie Colors in Oil from a new formula. The result is a product which mixes and tints more easily than formerly. In addition it is packaged with an attractive new, special-designed label, using Burgundy red, scarlet and yellow. Gillespie Colors in Oil are triple-ground, made of the highest quality pigments. They can be used for tinting oil, synthetic or varnish type paints, or enamels, or for graining or glazing when properly mixed. They are available in 31 standard basic colors and are packed in gallons, quarts, half-pints, and tubes.



CLAMPS

AB1816

A saw horse clamp and scaffold clamp are manufactured by the Pan-Continental Corp., Los Angeles, Calif., and distributed by Cappy Rix, 1507 West 7th St., Los Angeles 14, Calif. The device consists of an all-metal hinged cap that exerts bear trap ac-



tion on the cross piece and eliminates all possibility of collapsing through a cam action lock. Legs and cross piece may be cut on the job and quickly disassembled for transportation or storage. The saw horse clamp is made of 16-gauge steel, weighs 4½ pounds per pair and supports one ton. The scaffold clamp is also of 16-gauge steel, weighs 7½ pounds per pair including brace, and supports one ton.

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DECORATIVE MICARTA

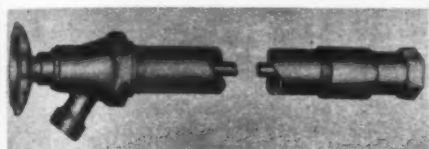
AB1809

Decorative Micarta, manufactured by the Westinghouse Electric Corp. and distributed exclusively by the United States Plywood Corp., 55 West 44th St., New York 18, N.Y., is now available in a variety of new colors and patterns. Mother-of-pearl and linen patterns in gray, blue and tan have been developed, together with mahogany, prima-vera, walnut and tru-wood to fit into any color scheme. This product is a high pressure laminate that resists abrasion, acids, alcohol and a heat up to 280° F. Its stain and burn-proof qualities make it useful where surfaces receive hard wear.

WALL HYDRANT

AB1807

A wall hydrant that will not freeze has been put on the market by the James Knights Co., Sandwich, Ill. Low in cost and easy to install, the

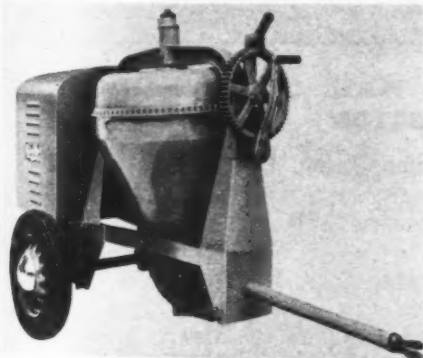


new hydrant is similar in principle to their non-freezing ground hydrant—long a favorite on farms. The controls and outlet pipe are located on the outside wall but the shut off valve is located inside the basement where it is safe from freezing temperatures. A rod from the hand control extends longitudinally through the center of the pipe and is connected to the shut off valve inside. The valve body and head are of brass, and the outlet is threaded for hose connection. In addition to the home it can be used in farm buildings, factories, and filling stations.

IMPROVED MIXER

AB1815

The improved Eclipse 3½-S Mixer made by Geo. C. Christopher & Son Iron Works, 1220 Blaine Ave., Wichita, Kans., embodies the latest refinements in design and is guaranteed as to materials and workmanship. Its quick uniform mixing action that is visible at all times and easy-to-



load features make it a handy machine for any contractor. The engine is completely enclosed in dustproof, weatherproof steel housing, and is controlled by a throttling governor to insure constant speed and steady

power. Both coarse and fine aggregate can be used in this machine that is easy to move and easy to load.

ALUMINUM WALL TILE

AB1804

New entry into the wall tile field is Metal Tile Products, Inc., Hastings, Mich. Their product, made of aluminum, is marketed under the trade-name Hastings Aluminum Wall Tile. Besides being fireproof and waterproof, this tile will not crack or peel and is impervious to alkali and stain. It is lightweight and can be applied over any dry, smooth surface with mastic cement as a base. The standard size tile is 5-inch by 5-inch and is available in 12 different colors. Designed for kitchen and bathroom installation, the product is priced to meet the needs of the moderate income group.

PORTABLE SANDER KIT

AB-1803

A complete working sander kit is available from the Sterling Tool Products Co., 363 East Ohio St., Chicago, Ill. The kit comprises a carrying case, fabricated of 20-gauge steel, in which is housed a Sterling 1000 portable electric sander and all accessories. The latter includes extra sanding pads, a sponge rubber pad, lubricating oil



bearing grease, two cartons of dust filters, an extra brush and spring assemblies, and a supply of abrasive papers and rubbing cloths. A pocket in the cover of the case provides space for the sander operator and service manual, parts price list, and one of the handy Sterling slide rule type abrasive selectors which gives grit and procedure recommendations for several hundred types of sanding and finishing operations.

PLASTIC WALL TILE CEMENT

AB1813

Moisture-proof, humidity-proof, color-proof, heat-proof and bond-proof are the qualities which give the Five-Proof Wall Tile Cement its name. Especially designed for application of plastic wall tile to old wall surfaces, this adhesive may be applied to dry wall surfaces with a notched spreader and the tile installed in the cement immediately. It is non-staining and will not bleed to adjoining surfaces. When subjected to direct sunlight, the cement becomes lighter in color but retains its bond to lightweight tile and to wall surfaces. Manufactured by the S & W Mould-

ing Co., 980 Parsons Ave., Columbus 6, Ohio, the product is available in five, three-and-a-half, and one-gallon containers.

THREE-WAY DOOR CHIME

AB1802

A door chime with three completely different musical signals is the new product of Edwards and Co., Norwalk, Conn., manufacturers of the famous non-electric Door Knocker Chime. The first signal is a continuous harmony chord, the second, two sym-



phonic notes in sequence, and the third is a single resonant note. Each is equipped with an individual push button which can be designated for a particular door or use; i.e., one signal can be used for the front door, one for the back, and the third for a side entrance or to code-page members of the family for phone calls.

NEW TYPE SPRAY NOZZLES

AB1821

New-type spray nozzles that will handle many kinds of compounds from shingle stain to asbestos-fibred aluminum paint are available on the Model 45-J hand spray gun and the Model No. 8 Pole gun manufactured



by the A. Shelburne Co., 739 Ceres Ave., Los Angeles, Calif. The unconventional design of the nozzles make it possible for the guns to handle fibre-impregnated compounds. The nozzle opening is round in cross section, yet delivers a fan-shaped spray that is distributed evenly over a wide oval without the use of sidewings.

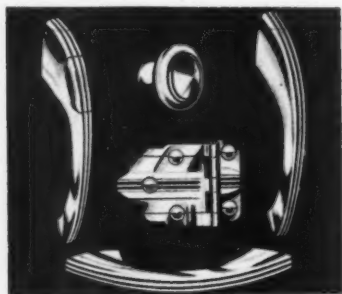
CABINET HARDWARE

AB1811

Prompt shipment of the matched Streamlux line of cabinet hardware is announced by the manufacturer, The American Cabinet Hardware Corp., Rockford, Ill. This hardware is made of zinc alloy on which heavy nickel plating is applied and buffed
(Continued to page 102)

(Continued from page 101)

to a high polish to seal all pores in the metal and prevent oxidation. A heavy nickel plating is then put on



followed by the last coating—a chromium plating. To enrich the chromium finish, black is applied to the embossed lines in the design. The Streamlux pattern is one of the most popular in the Amerock line and is produced at moderate cost.

ZINC WALL COVERING

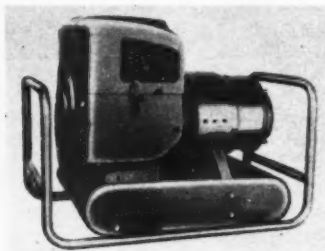
AB1806

Two new designs, marble and panel, have been added to the multiple block design line of bonderized zinc wall covering produced by The Chromite Co., Board of Trade Building, Chicago, Ill. Made of bonderized zinc, this wall covering is moisture-proof, rust-proof, non-corrosive and will not fade. It has a washable surface with smooth finish that will not collect dirt or grease, and it is easy to apply. Especially suitable for kitchens and bathrooms, it can also be used to advantage in offices, hotel lobbies, restaurants, hospitals or other commercial buildings. This product is produced in sheet form in a variety of colors.

ELECTRIC PLANTS

AB1808

A 5000-watt electric plant weighing only 272 pounds, known as the 5CK-115M is available from the L. W. Onan & Sons, Inc., Minneapolis 5, Minn. Designed for heavy-duty service, this model employs the new Onan "CK" air-cooled, four-cycle, two-cylinder gasoline engine as a prime mover. The air-cooled engine is equipped with improved high tension



magneto ignition which produces a hot spark for quick and sure starting. It is simple to operate and maintain, and has a removable cast-aluminum engine-hood to protect the unit from dust and water. Opposed design and leaf-spring mounting assure smooth performance. This plant is available in 60 or 50-cycle A.C. and D.C. in stationary or portable types with either electric or manual starting.

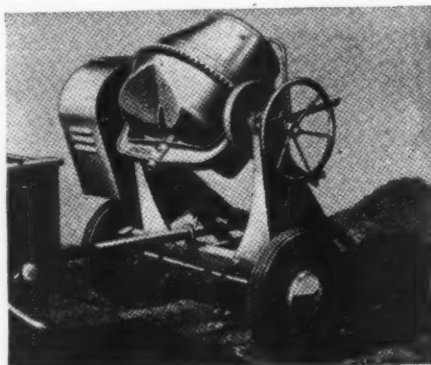
MIDGET LOUVER

A louver designed for installation in sections of the home or building where ventilation is difficult is made by the Midget Louver Co., 6-8 Wall St., Norwalk, Conn. Made of aluminum, it is 2½ inches in diameter, and easy to install. Just drill a hole and insert. Included in its simple design are slots for tension, screen to keep out insects, and swedge fasteners equally spaced to keep the louver in place. Some recommended uses are in flat roofs, gables of small attics, insulated sidewalls, eaves, soffit, sidewalls and above the sill in unexcavated cellar areas.

TRAILER-TYPE MIXER

AB1801

An improved 3½-S end-discharge, tilting mixer for mixing concrete, plaster and bituminous materials is announced by the Jaeger Machine Co., Columbus, Ohio. Designed with support legs in the rear, the unit can be towed in mixing position and backed directly up to material piles, ready to go to work without turning



or spotting. Wheelers can approach from either side, take the load in the center of the barrow and leave without reversing direction. A V-bottom drum which combines with two double mixing blades to produce fast, criss-cross movement of the material is an exclusive design feature, patented by Jaeger. It speeds the mixing action and adapts the machine to the efficient mixing of plaster or bituminous material as well as concrete.

PLASTIC TOILET SEAT

AB1812

A toilet seat molded of Ethocel, a plastic developed by the Dow Chemical Co., is being manufactured by the Federal Seat Co., 601 West 26th, New York, N.Y. Designed to fit all standard makes of toilets, the seats have metal fixtures molded right in the plastic, and are produced in pastel



shades of blue, rose, green, and in black and white. Important features are durability, no surface coating to peel or crack, and colors which are "all the way through." The plastic can be polished to a high degree and kept spotlessly clean by washing with soap and water. The seat carries a guarantee and is distributed through retail stores.

SLIDING DOOR FRAMES

AB1810

Sliding door frames with metal reinforced jambs which prevent warping are available from the Nordahl Sliding Door Frames Co., 180 West Alameda Ave., Burbank, Calif. Designed for a standard 2x4 stud wall, the frame is easy to install. Simply head-over approximately twice the width of the door opening, set the unit in place and nail solid to rough opening. Whether a wall be plaster, plaster board or plywood panels, there is a frame to fit it. The jambs come in two widths: Jam A for plaster walls and jamb B for ½-inch plaster board or plywood panels. Fiber rollers on a metal track operate the door noiselessly. Where shipping costs prohibit sending built-up frames, or for quantity orders, the manufacturer will ship essential parts in a knocked-down bundle to be assembled on the job or in the mill.

CHECK NUMBERS AND MAIL COUPON FOR INFORMATION

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AB1803	AB1807	AB1811	AB1815	AB1819
AB1804	AB1808	AB1812	AB1816	AB1820

When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder.

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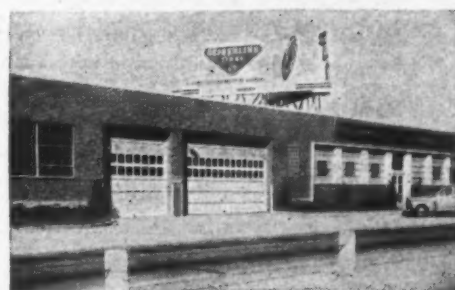
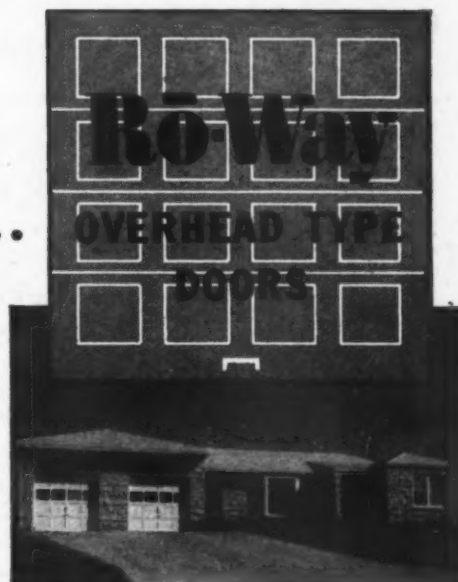
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Catalogs and HOW-TO-DO-IT INFORMATION

387—BRASS AND COPPER IN YOUR HOME—the title of a new brochure published by Chase Brass & Copper Co., Waterbury 91, Conn., deals with the common uses of these products in the home. Several pages, devoted to radiant heating, give its history, tell how it works, and offer suggestions as to approved types of installations.

388—LUMBER PRODUCTS—is the title of a highly informative booklet offered by the Fordyce-Crossett Sales Co., Fordyce, Ark. Crossett operations include pine and hardwood saw-mills. The book tells the story of their manufacturing methods and equipment and gives important facts about their products: studs, joists, rafters, flooring (both pine and hardwood), wall paneling and millwork stock.

389—GAS AND ELECTRIC WATER HEATERS—The Combustion Engineering Co. Inc., Chattanooga, Tenn., have a number of bulletins which present the outstanding features and specifications of their automatic heaters. Easy to read charts show sizes and ratings of standard models. Photographs show manufacturing details and models available.

390—DOOR FRAME FOR GLASS DOORS—An eight-page booklet describing the metal door-frame assembly for use with Herculite glass doors is available from the Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa. Twelve styles, suitable for all types of buildings are shown. Also included are typical section views and variable dimension tables.

391—BOILERS AND RADIATORS—Specification sheets giving boiler ratings and radiator sizes of the Dunkirk boilers and radiators can be obtained from the Dunkirk Radiator Corp., Dunkirk, N.Y. These units are known for their compact size, slender design and high heating efficiency. Models of both units are pictured.

392—MOTOR OPERATED DOORS—for industrial or commercial buildings are described and illustrated in Bulletin No. S-17 prepared by The Kinnear Manufacturing Co., 7000 Fields Ave., Columbus, Ohio. The mechanics of the door are covered in detail, and information given on how existing Kinnear doors can be economically motorized at any time.

393—METAL DOORS AND FRAMES—are the subject of a four-page bulletin, A.I.A. File No. 16-A, prepared by the Virginia Metal Products Corp., Orange, Va. Pertinent information on construction, sizes, design and installation is given. A line drawing shows installation details.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department
American Builder,
105 W. Adams St., Chicago 3, Ill.

(January, 1948)

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Trends

(Continued from page 59)

shorter than usual this year. Structural steel, reinforcing bars, sheet steel for warm air furnaces, duct work, downspouts and gutters, and nails will remain hard to get. Cast-iron soil pipe may continue to be tight during the first few months. The freight car shortage will not be fully overcome during 1948, which means continuation of distribution problems even when output is adequate.

Labor in Better Supply

It is estimated that about 200,000 additional workers will be needed in the construction industry this year to permit an anticipated increase of \$2.6 billion in the volume of new building. The apprenticeship training program which has been making substantial progress will be able to supply a large number of the mechanics that will be required. More than 100,000 were in training in the fall of 1947, and results should improve in 1948. BLS estimates that 2,150,000 workers will be employed by construction contractors next September, an increase of a quarter of a million workers over the high in September 1947. Of these construction workers, 425,000 will be carpenters; 100,000, bricklayers; 80,000, painters and glaziers; 55,000, plumbers and steamfitters, and 52,000, plasterers.

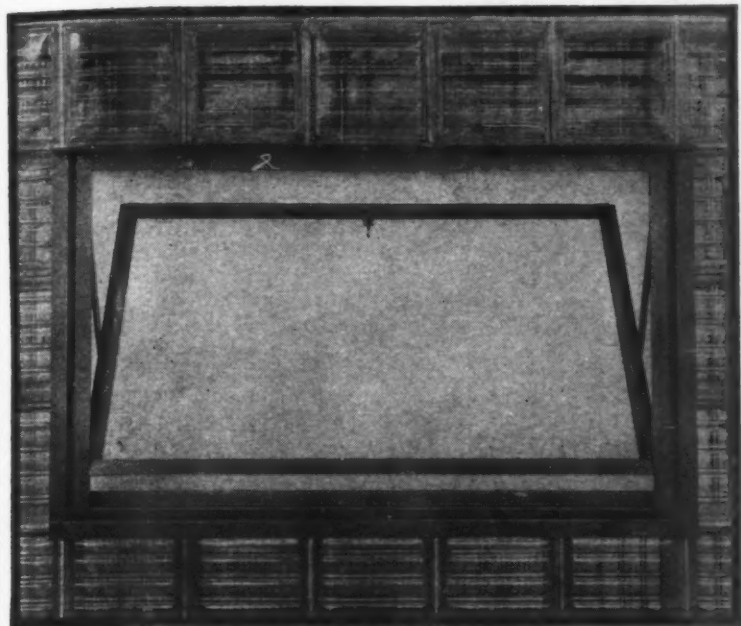
Firm Cuts Price on Portable Radial Saw

ONE of the first substantial postwar price cuts on power tools took effect recently when American Saw Mill Machinery Co. announced a list price reduction of nearly 20 per cent on its Monarch Uni-Point Portable Radial Saw, Model TNT. The firm also announced that the machines will be made immediately available in greater numbers than they previously were. The new price includes blade and carrying frame.

Executive Secretary For Producers' Council Named

CHARLES M. MORTENSEN of Los Angeles has been appointed executive secretary of the Producers' Council, national organization of building products manufacturers, and assumed his new duties about November 1, David S. Miller, council president, has announced. Mr. Mortensen has served as west coast representative of the American Iron and Steel Institute for the last two years. Previously he was engaged in sales engineering and promotion for the United-Des Moines Clay Products Co., and engineer and public relations director for the Structural Clay Products Institute. In 1944 and 1945 he served in the U. S. Navy, leaving with the rank of Lieutenant. He graduated from Iowa State College in 1934.

HOPE'S STEEL WINDOWS *and* BILTIN SUB-FRAMES *in* GLASS BLOCK



Outside View of a Type No. 3 Window



Inside View of a Type No. 4 Window

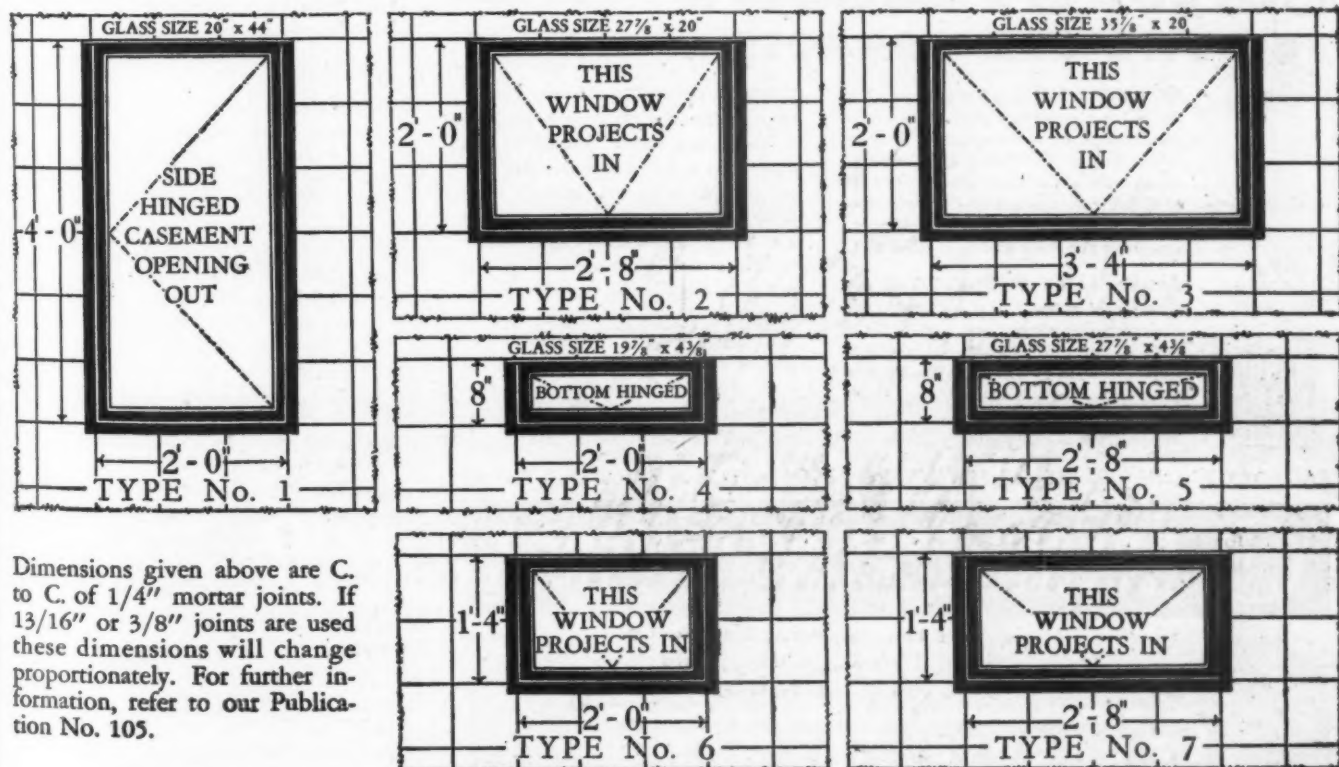
Type 1 can be used with 6", 8" or 12" blocks; types 2, 3, 4, 5, 6 and 7 with 8" blocks only. All types are suitable for industrial and commercial buildings. Types 1, 4 and 5 are frequently used in residential buildings.

Subframes are made from 14 ga. galvanized sheets. Subframes with

ventilators factory-inserted is preferred method of shipment for types 1 to 8 inclusive. Windows are prepared for later reception of screens. Subframes and windows are bonderized and painted one coat special rust-inhibitive primer, stoved on.

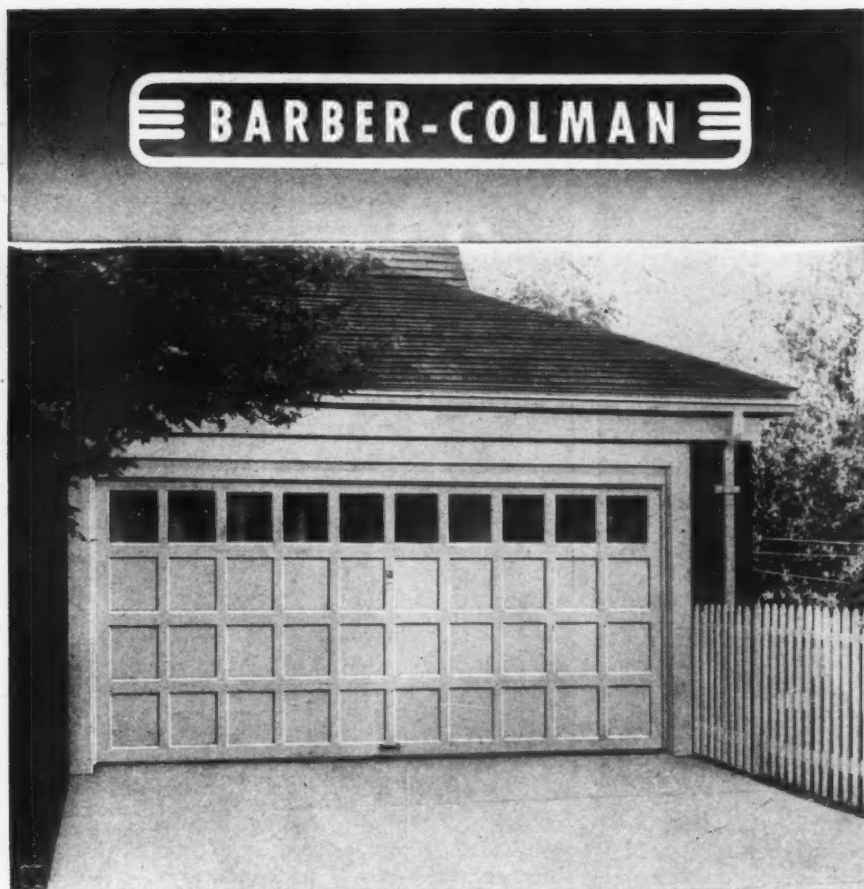
OUTSIDE ELEVATIONS

SCALE:
HALF INCH TO A FOOT



Dimensions given above are C. to C. of 1/4" mortar joints. If 13/16" or 3/8" joints are used these dimensions will change proportionately. For further information, refer to our Publication No. 105.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS
HOPE'S WINDOWS, INC., JAMESTOWN, NEW YORK



**IT'S A GOOD IDEA TO USE
D-O-U-B-L-E W-I-D-T-H
Barcol OVERdoors
FOR TWO-CAR GARAGES...**

NO CENTER POST. When planning the doors for a two-car garage (either new construction or remodeling), a double-width Barcol OVERdoor offers several worthwhile advantages. The center post is eliminated, amount of door mechanism is reduced, and appearance is better, especially for long and low structures.

SEE OUR
CATALOG
IN SWEET'S



EASIER, SAFER DRIVING. With the center post gone, it is a lot more convenient to get cars in and out, particularly if a turn near the door is involved. Clearances are greater, and the chances of colliding with the door frame are reduced. With the present trend in auto design, this is a considerable help.

ELECTRIC OPERATOR. More and more, electric door operators are being used in residence garages. A double-width door offers a saving here, because only one operator is needed. It is not mandatory to use an electric operator with a double-width Barcol OVERdoor since tailored counterbalancing makes it easy to handle. For installations with electric operators, the Barcol Radio Control gives the final touch of convenience — control of the door by radio from the car! Write for information on all Barcol products, or ask your Barber-Colman representative for details.

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES in PRINCIPAL CITIES



BARBER-COLMAN COMPANY
104 MILL ST. • ROCKFORD, ILLINOIS

BARBER-COLMAN

**Sargent Co. Executive
Passed Away November 24**

GEORGE FREDERICK WIEPERT, who had been associated with Sargent & Co., New Haven, Conn., for 68 years, passed away November 24, at the age of 91.

Mr. Wiepert's first job with the firm was in 1879. In 1909, he was elected a director, and in 1928, he became a vice president. A popular figure at industry meetings and conventions for decades and the dean of American hardware makers during the last 10 or 15 years of his life, Mr. Wiepert served from 1938 to 1942 as president of the Hardware Manufacturers Statistical Association. From 1915 through 1918, and from 1922 to 1941, he was president of the Bright Wire Goods Manufacturers Service Bureau. Mr. Wiepert had remained active in company affairs until a few weeks before his death.

**Sullivan Succeeds Berns
With Cement Manufacturer**

JOSEPH A. SULLIVAN has been named publicity manager for Universal Atlas Cement Co. of New York, a subsidiary of U.S. Steel Corp. Mr. Sullivan succeeds Max A. Berns who died after 32 years with the company.

Mr. Sullivan was assistant publicity manager prior to Mr. Berns' death. He is also director of public relations for the company. A graduate of N.Y.U. School of Advertising and Marketing, he was assistant advertising manager for Columbia Phonograph Corp. until 1927, when he joined the Biow Co. advertising agency as a copywriter. From 1929 to 1931, he was direct-mail advertising manager for the Chicago Pneumatic Tool Co., and from 1931 to 1935, was copy chief for Sweet's Catalogue Service Division of F. W. Dodge Corp. He returned to Chicago Pneumatic and was made advertising manager for that firm in 1941. He joined the Universal Atlas Cement Co. in 1946.

Mr. Berns, whom Mr. Sullivan succeeds, was well known in the promotional field. Born in Milwaukee, he obtained his degree in civil engineering from the University of Illinois in 1910, and became an instructor in mathematics in a Cleveland high school until 1913 when he joined Universal Atlas Cement Co. as publicity representative. He was with the company continuously until his death, except for a two-year interlude when he served in World War I as a captain of the U. S. Engineers. He had been publicity manager since 1920.

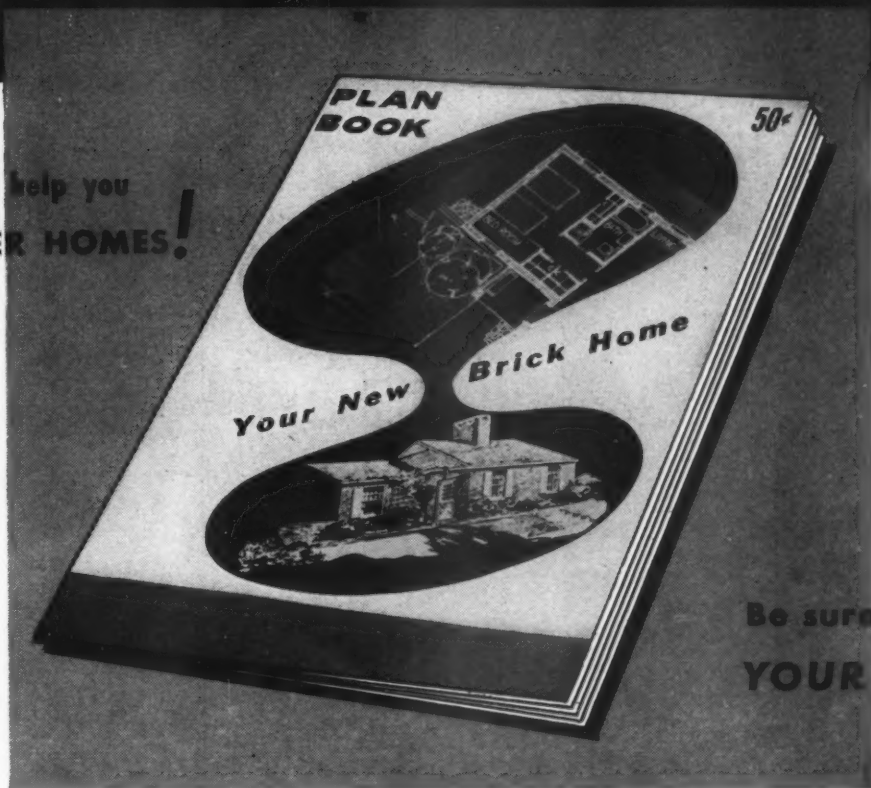
**Manufacturers' Catalogs
Service**

A COMPREHENSIVE filing system of Manufacturers' Catalogs, indexed on the basis of the American Institute of Architects filing system, has been set up by the Miami Builders' Exchange, Miami, Fla. Members and the local building public-at-large are invited to make use of this service.

NEW - JUST OFF THE PRESS!

Plan Book of 30 Brick Homes.

This book will help you
PLAN BETTER HOMES!



Be sure to get
YOUR COPY!

Here's a well-illustrated book of 30 plans for moderate priced brick homes created by skilled architects. Each plan offers great space efficiency; maximum in beauty, size and living comfort. Each is designed of permanent, attractive materials.

This book is full of details, information and suggestions. It will help contractors and builders satisfy

the great national desire for home-ownership with quality homes of brick. Complete blueprints are available at nominal cost.

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Be sure to get this valuable aid to better housing... compiled by the National Authority on Brick and Tile Construction.

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STRUCTURAL CLAY PRODUCTS INSTITUTE
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SEND 50 CENTS WITH THIS COUPON FOR YOUR COPY

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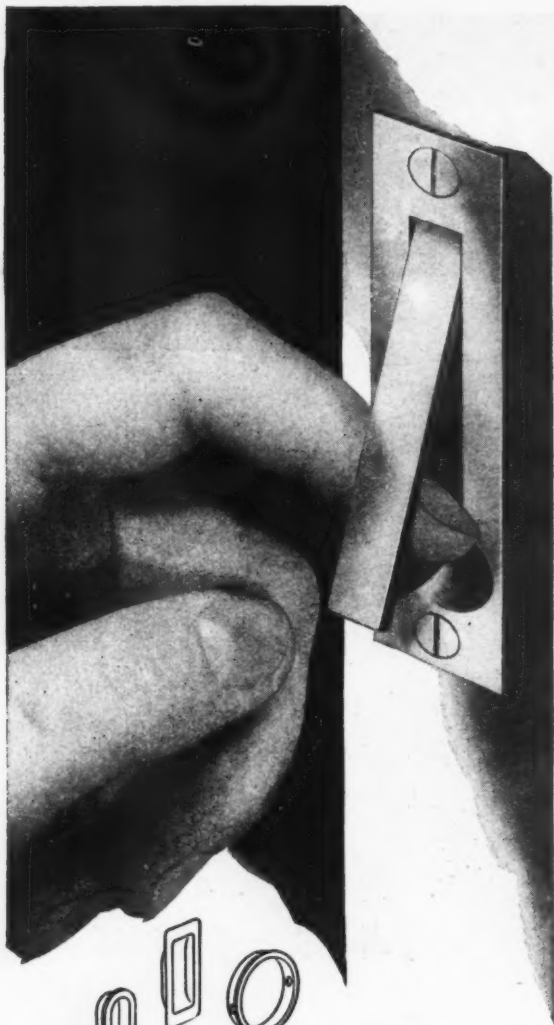
Please send me your new plan book—"Your New Brick Home."

I enclose _____ for _____ copies.

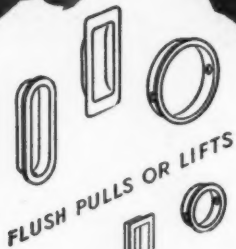
NAME AND POSITION OR TITLE

COMPANY AND TYPE OF BUSINESS

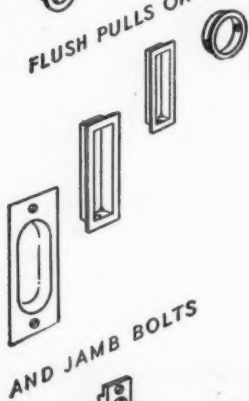
ADDRESS (STREET, CITY AND STATE)



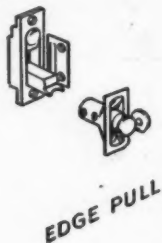
Sliding Door Hardware



FLUSH PULLS OR LIFTS



AND JAMB BOLTS



EDGE PULL

Solid brass fittings in traditional design, heavy pattern, to help you keep pace with the present trend toward the ever-increasing use of sliding doors. Rite sliding door hardware wins immediate approval when shown. It is good-looking, substantial, functional. In the line you will find a number of sizes and styles of stamped and forged brass and bronze flush pulls and lifts, suitable for windows and cabinet panels as well as doors, a sturdy edge pull with concealed grip, for heavy doors, and jamb bolts for use as locking devices on sliding doors and windows . . . all are designed for easiest mounting. You are certain to want this quality line . . . send now for catalog sheet No. 100.

QUALITY HARDWARE FOR



NEARLY HALF A CENTURY

ADAMS-RITE MANUFACTURING CO.

540 WEST CHEVY CHASE DRIVE, GLENDALE 4, CALIFORNIA, U. S. A.

New Plaster Coating Restores old Walls

A NEW type bonding plaster makes it possible to refinish old, damaged walls or ceilings without needing to knock out the old plaster and remove the wood trim. It is said to bond perfectly to cracked, chipped or painted walls, to Spanish plaster, glazed tile, smoothest concrete, brick, fiberboard, wallboard and insulation board. Called "Nu-Wall," it is manufactured by Nu-



WORKMAN applying a thin coat of new bonding plaster to rough wall surface

Wall Manufacturing Co., 923 North Nineteenth St., Milwaukee, Wis.

The material is easy to apply. The surface must be firm. All loose plaster, scaling paint, calcimine whitewash or wallpaper must be removed. Then a thin scratch coat of the bonding plaster, mixed without sand, is troweled over the wall. It will set in about an hour, ready for the full application.

On various types of wallboard, fiberboard, concrete blocks or smooth cement, glazed tile, Spanish plaster, cinder blocks or painted brick, a coat of the bonding plaster approximately $\frac{1}{8}$ inch thick is applied. When used



A ROOM after refinishing rough walls

on dry-wall construction, joints should be taped properly.

Nu-Wall is slightly tacky when mixed, and cannot be troweled completely smooth. Therefore, a finish coat is applied over it when the bonding plaster has set. Trowel or satin float finishes can be used. Nu-Wall is mixed with sand and water and should never be retempered.

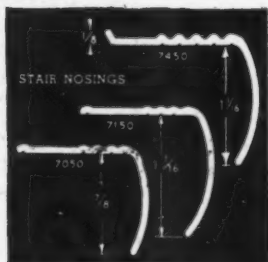
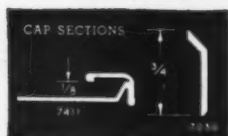
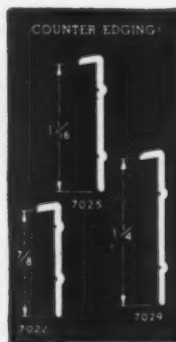
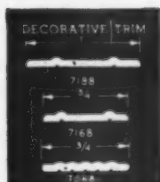
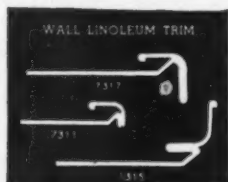
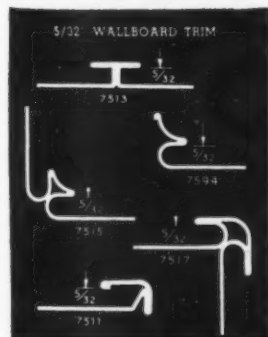
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NEW
ECONOMICAL

Chromtrim METAL MOULDINGS

Presenting the Most-Demanded Basic Shapes for '48

A wisely-designed selection of metal moulding profiles. Limited in number to allow for extensive manufacturing economy, Chromtrim passes on this savings to help you meet the pressure for restricting building costs. Over 90% of all moulding specifications for private, commercial and industrial installation can be met with the new 34 Chromtrim Basic Shapes for '48.



34 New Profiles For Your Basic Moulding Needs

- Wallboard Trim
- Wall Linoleum Trim
- Counter Edging
- Stair Nosing
- Inside and Outside Corners
- Straight-Face Nosings
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- Cap Sections
- Decorative Trim
- Cove Sections
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R. D. WERNER COMPANY, Ltd. • Port Huron, Ontario

R. D. Werner Co., Inc., 293 Fifth Ave., New York Dept. AB-148
Please send complete literature and prices on Chromtrim 1948 line of Basic Shapes.

Firm Name

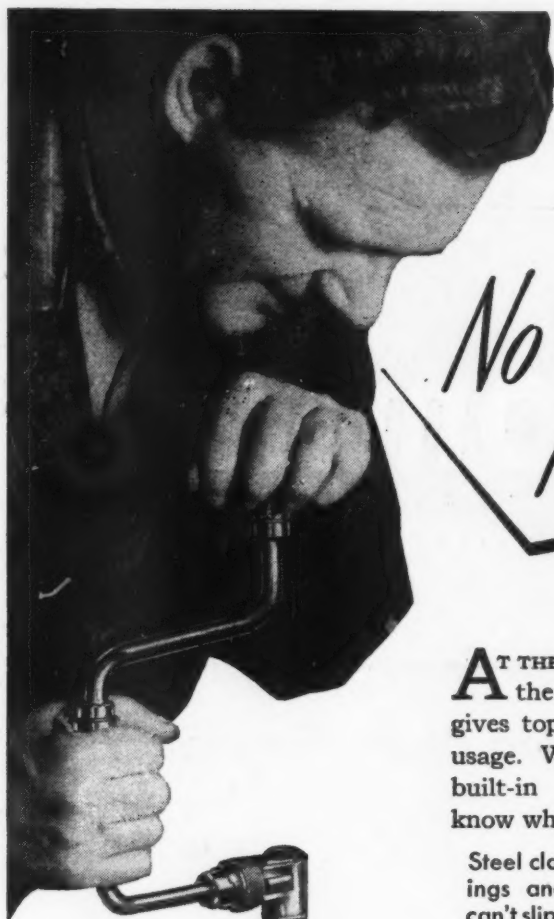
Buyer's Name

Street

City.....Zone.....State.....

Please check nature of your business:

Distributor.....Builder.....Mechanic.....

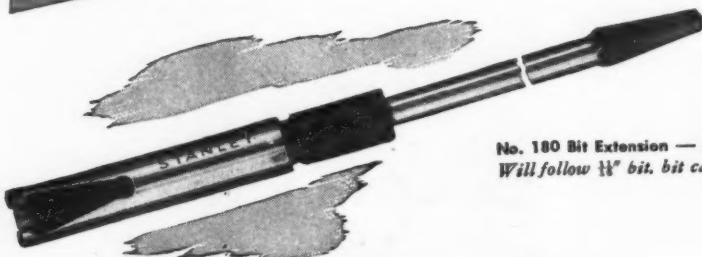
NO. 923
BIT BRACE

*No Coddling
Needed*

AT THE BENCH or out on the job, the Stanley No. 923 Bit Brace gives top service even under hard usage. When you consider these built-in quality features, you'll know why:

Steel clad head turns on ball bearings and bronze bushing. Handle can't slip because collars are swaged to the bow. All steel box ratchet is locked in place with perforated nut, cotter pin and slotted screw. Head and handle are hard, tough cocobolo wood. Forged and hardened universal jaws will not bend, jam or slip. They hold round shank bits and drills from $\frac{1}{8}$ " to $\frac{1}{2}$ " and taper shanks as large as Clark's No. 2 Expansive.

For tools that carpenters know and prefer, use STANLEY. Catalog No. 34 shows the complete line — write for a copy. Stanley Tools, New Britain, Connecticut.

No. 180 Bit Extension — 18" and 24" lengths.
Will follow $\frac{1}{8}$ " bit. bit capacity 1".

STANLEY

Reg. U.S. Pat. Off.

HARDWARE · HAND TOOLS · ELECTRIC TOOLS

Functional Kitchen Ventilation Important

MODERN kitchen design emphasizes function by dividing the most efficient kitchens into primary work centers for food cleaning, food preparation and food cooking. The full functional benefits of such design are realized only if proper ventilation is



EXPLODED view of Pyrne & Co. compact "Blo-Fan" electric exhaust ventilator



THE modern functional kitchen should have a ventilator directly over range

provided. The kitchen ventilator should meet four requirements:

1. It must move unwanted air, steam, etc. from inside to outside before it can contaminate or offend.
2. It must provide enough intake volume to pull contaminated air directly into the ventilator and have enough power to force it outside despite duct and outside air resistance.
3. It should be compact.
4. It should be automatic, economical and of good appearance.

Since warm air naturally rises straight up, the best location for the ventilator is directly over the range so it will dispose of cooking odors, grease and steam. A ceiling location is good, or at least a wall location which is directly over the range.

The "Blo-Fan" electric exhaust ventilator illustrated here, manufactured by Pyrne & Co., builds in between standard ceiling joists or, when installed in a wall, occupies only $3\frac{1}{2}$ inches behind the plaster. Its compactness permits installation in ceilings, even in two-story houses, or in inside or outside walls to service any range properly, regardless of the kitchen plan.



Better Homes & Gardens sells the work you're doing

It's our job to help create wide public acceptance for the best in home design and equipment. It's our job to help create an appreciative market (over 3,000,000 families) for the trends that architects and builders are directing.

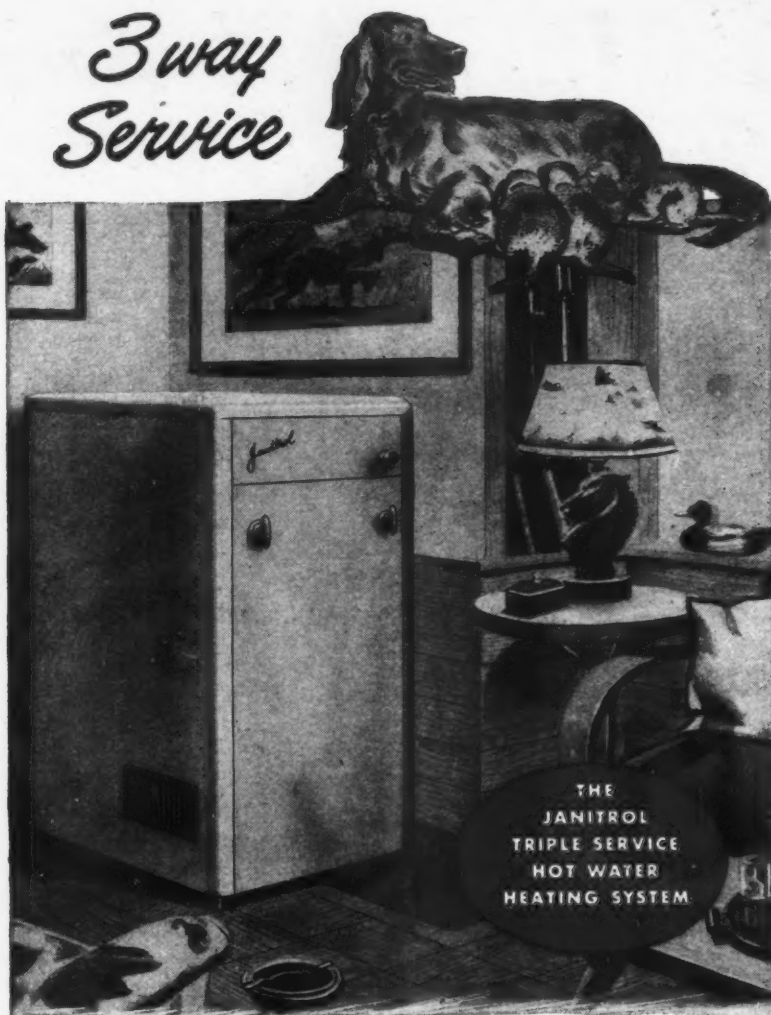
It's our consistent month-by-month job on everything that goes into a home that makes Better Homes & Gardens readers eager to accept the new ideas you offer them.

And it's this program that's made BH&G far and away the leading magazine for home planning, home improving and home equipping.



America's First Service Magazine

3 way Service



From a New, Single, Modern HEATING UNIT

*Supplies all household needs for
hot water and heating*

FROM a single Janitrol unit you get three separate supplies of hot water at the right temperatures . . . one for efficient, automatic home heating . . . one for automatic dishwashing and laundry appliances . . . one for bath, shower and lavatory.

This complete Janitrol system, gas or oil fired is so compact and highly efficient, it can be installed in any convenient place in the basement . . . the first floor, in a closet, utility room or adjoining garage . . . even in the attic.

Comfort Heating: The Janitrol hot water system is a complete factory tested package. When used with modern convactor radiators the temperature of each room can be individually controlled. Hundreds of radiant panel heating installations in ceilings and floors have also been made, utilizing Janitrol's advanced design for low cost of installation and proved performance.

YOUR OPPORTUNITY TO REDUCE BUILDING COSTS— This new Janitrol heating and hot water system offers you a wonderful opportunity to reduce building costs . . . by giving your clients what they need with extra advantages . . . giving them modern house heating and a hot water heater in one efficient unit, complete, ready for quick, economical installation.

Write today for complete specification data and information on typical installations.

Janitrol

SURFACE COMBUSTION CORP., TOLEDO 1, O.

TRIPLE SERVICE HOT WATER HEATING SYSTEM



Comfort Heating



Kitchen and Laundry



Lavatory and Bath

Organization of New Wholesale Building Material Association Under Way

FINAL organizational work is being completed on a new national association of wholesale distributors of building materials. The new group will promote and further the interests of its members, who will be corporations, firms and individuals, primarily and actively engaged in the distribution of building materials and related products at the wholesale level.

The new group is being set up as a division of the National Plywood Distributors Association, although membership in the building material division of that group will not entitle members to information and data prepared for plywood distributors. The divisions are to be separate and distinct, each with its own officers and directors, although with an equal voice in the selection of a president and managing director and such other matters as directly concern the two in the overall organization.

George E. Voorhees, of the Michigan Wholesalers, Inc., Jackson, Mich., who is now president of the National Plywood Distributors Association, automatically remains as president of the new national organization. B. E. Babbitt, who is managing director of the plywood association, likewise remains as managing director of the new association of building material wholesale distributors.

A vice president will be named to head the plywood division, and another vice president will head the material distributors. Under each vice president will be a chairman and vice chairman for each of four sections of the country. The chairman for the Central Section for building material distributors is John P. Ashton, Ashton Wholesale Service, Des Moines, Iowa, and vice chairman is Joseph Donahue, Great Lakes Distributing Co., South Bend, Ind.

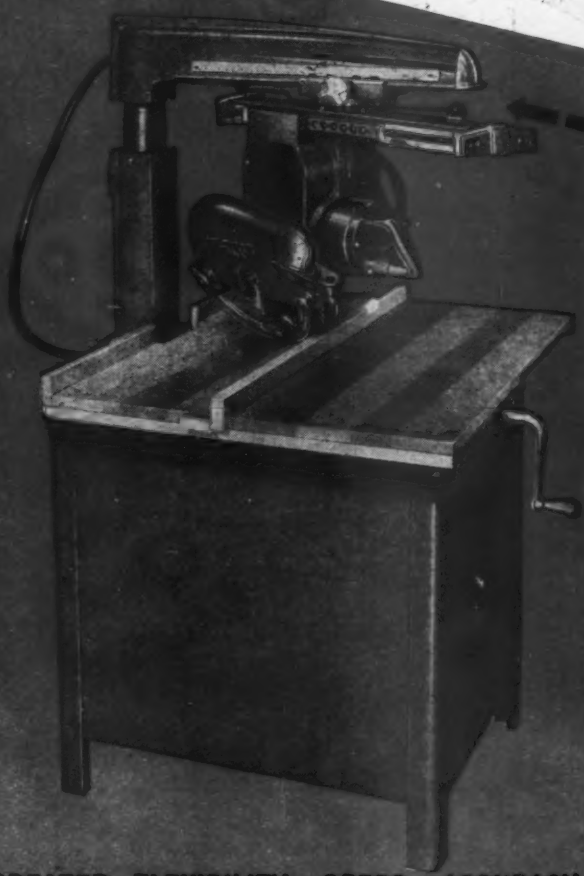
An executive committee to assist the chairman and vice chairman of the central section in perfecting an organization was named. The committee consists of Mrs. Elizabeth Anderson, Wichita Building Material Co., Wichita, Kans.; Walter G. Meyer, W. H. Pepkorn Co., Milwaukee, Wis., and Hubert Heying, Stark & Co., Kansas City, Mo.

It is not the intention of the new association of wholesale building material distributors to infringe upon other national or sectional organizations, such as plywood, sash and doors, hardware, glass, and hardwood lumber. The new organization will concentrate its activities on insulation board, blanket and fill insulation, wallboards and hardboards, asphalt products, asbestos products, clay products, steel and wire products, aluminum building products, flooring materials, gypsum and lime products, building paper.

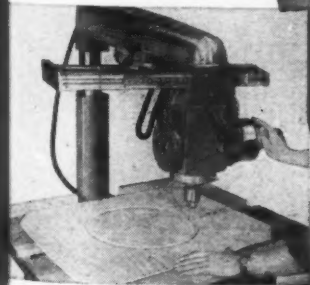
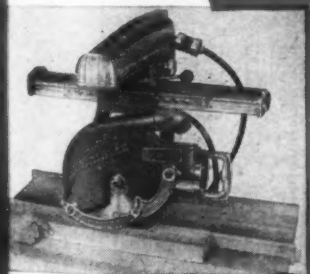
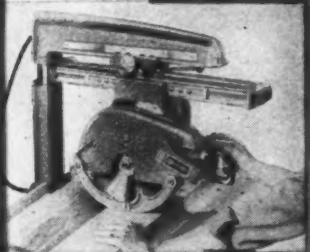
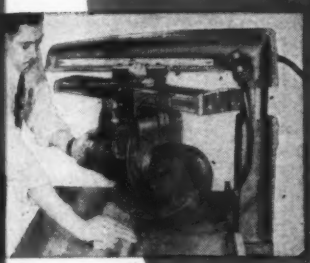
The new organization is now operating.
(Continued to page 116)

THE VERSA
WILL CROSS
LEVEL CUT
COMPOUND
CIRCLE R
FLOW .. D
NOTCH .. T
CARVE ..

NO OTHER SAW HAS THIS *Versatile Elbow*



**MULTIPLEX
MODEL 40A**



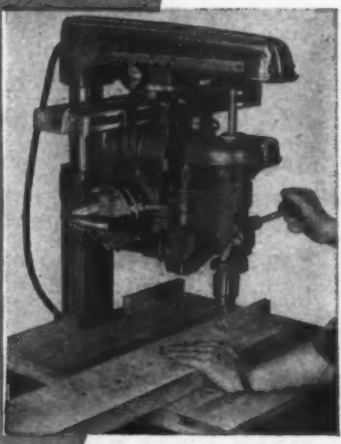
GREATER FLEXIBILITY, SPEED, ACCURACY

A single MULTIPLEX Radial Arm Saw will perform almost any wood working operation and will do the job quickly, accurately and with exceptional ease of operation.

Its surprising performance is due primarily to the Multiplex EXCLUSIVE VERSATILE ELBOW or center pivoted track which is also movable backward and forward on the sturdy rigid overarm.

This provides an infinite number of saw positions with 100% mitering capacity. Left hand as well as conventional right hand miters up to 90° are cut with the saw in the approximate center of the table. No lost travel of the cutting head. The greater flexibility and versatility of the Multiplex permits more operations, greater production and lower operational cost.

Write today for literature and name of nearest dealer.



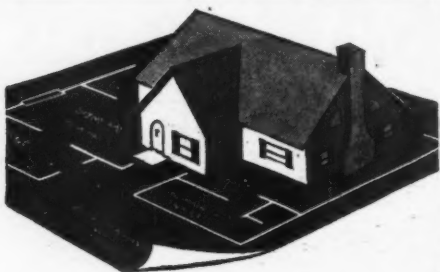
MULTIPLEX

Radial-Arm Saws

RED STAR PRODUCTS INC.
3455 VEGA AVE., CLEVELAND 13, OHIO U. S. A.

THE VERSATILE MULTIPLEX
WILL CROSS CUT.. RIP .. MITER
LEVEL CUT OFF .. BEVEL RIP
COMPOUND MITER .. ROUTE
CIRCLE ROUTE .. SHAPE
LOW .. DADO .. RAFTER
NOTCH .. TENON .. RABBET
CARVE .. SAND .. PLANE

The Multiplex Models 30A and 40A can be quickly and easily converted into high speed, ball bearing radial arm drill presses attached to, and driven by, the saw motor. Valuable also for shaping, carving, routing, circle routing, sanding, planing and many other operations.



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STAY FRESH AND BRIGHT FOR YEARS

Cabot's Gloss Collopakes have tremendous hiding power and lasting brilliance because they are made with our patented "Collo-paking" process. Pure pigments are broken down into particles 100 to 1000 times as fine as in ordinary paints and colloiddally combined with the vehicle. *No fillers or adulterants are used.*

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Cabot's Collopakes Offer You a Wide Variety Of Attractive Colors

5 Greens, 9 Reds and Browns, 4 Blues, 2 Creams, 2 Grays, as well as Cabot's famous Double White, and Old Virginia White.

WRITE FOR COLOR CARDS and complete information today!

Samuel Cabot, Inc.

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Boston 9, Mass.

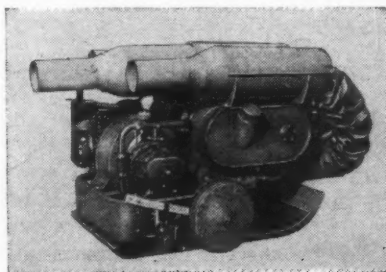
(Continued from page 114)

ating as the building materials division of the National Plywood Distributors Association. Offices are at 37 South Wabash in Chicago. There are several hundred concerns in the United States eligible to join this new association for wholesale distributors of building materials. As of December 15, the following firms were listed as members: Alexander Warehouse & Sales Co., Chicago; Ashton Wholesale Service, Des Moines, Iowa; Builders Supply Co., Springfield, Ill.; California Builders Supply Co., Oakland; Cape Supply Co., Cape Girardeau, Mo.; Draper Supply Co., Lake Geneva, Wis.; Fischer Lime & Cement Co., Memphis, Tenn.; Four State Supply Co., Carthage, Mo.; Great Lakes Distributing Co., South Bend, Ind.; Hass Wholesale, Inc., South Bend, Ind.; Herrick Co., Waterloo, Iowa; Indiana Wholesalers, Inc., Evansville, Ind.; Indianapolis Plywood, Indianapolis, Ind.; Kneeland Bigelow Distributing Co., Bay City, Mich.; Koschnick & Co., Indianapolis, Ind.

Lumber Dealers Supply Co., Green Bay, Wis.; Lumbermen's Supply Co., St. Joseph, Mo.; Lumbermen's Supply, Madison, Wis.; Lumbermen's Wholesale Supply Co., Indianapolis, Ind.; Lumbervard Supply Co., St. Louis, Mo.; Lumbermen's Credit & Warehouse Co., Kalamazoo, (Continued to page 118)

HERE'S HEAT at LOW COST!

Stewart-Warner Portable INSTANT HEATERS



FULL HEAT IN 90 SECONDS

100,000 BTU's per hour on 1 gal. of gasoline. Equals heat output of oil-burning furnace for 8 room house. 3 ducts (two-11 ft. long, one-22 ft. long) carry heat to points desired. Easy to operate—Easy to move. Completely automatic.

HUNDREDS OF USES

Instant heat for new buildings; drying plaster, cement, paint; preheating roofing materials, linoleum; thawing out water systems, radiators on cars and trucks, starting cold engines, drying equipment, etc. Absolutely no fire danger.

Slightly used (government surplus, original cost \$585.00), thoroughly tested and serviced before delivery. Ready for instant heat.

\$195.00
F.O.B.
Kansas City

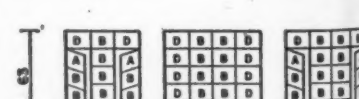
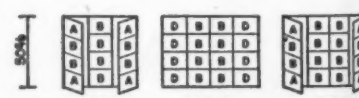
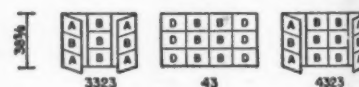
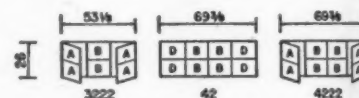
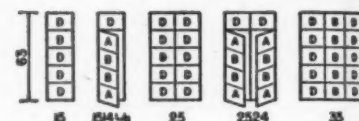
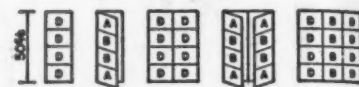
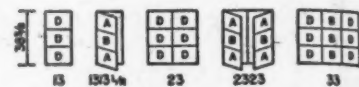
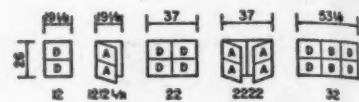
Write, wire or phone
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Phone Harrison 1692

WARE ALUMINUM RESIDENCE CASEMENTS

OVERALL WINDOW DIMENSIONS

IN INCHES



Dimensions shown are to outside edge of frame. Drawings illustrate openings viewed from outside. I indicates that vent is hinged to left when viewing window from outside. When ordering specify I or R. Bottom ventilator and basement window open in.

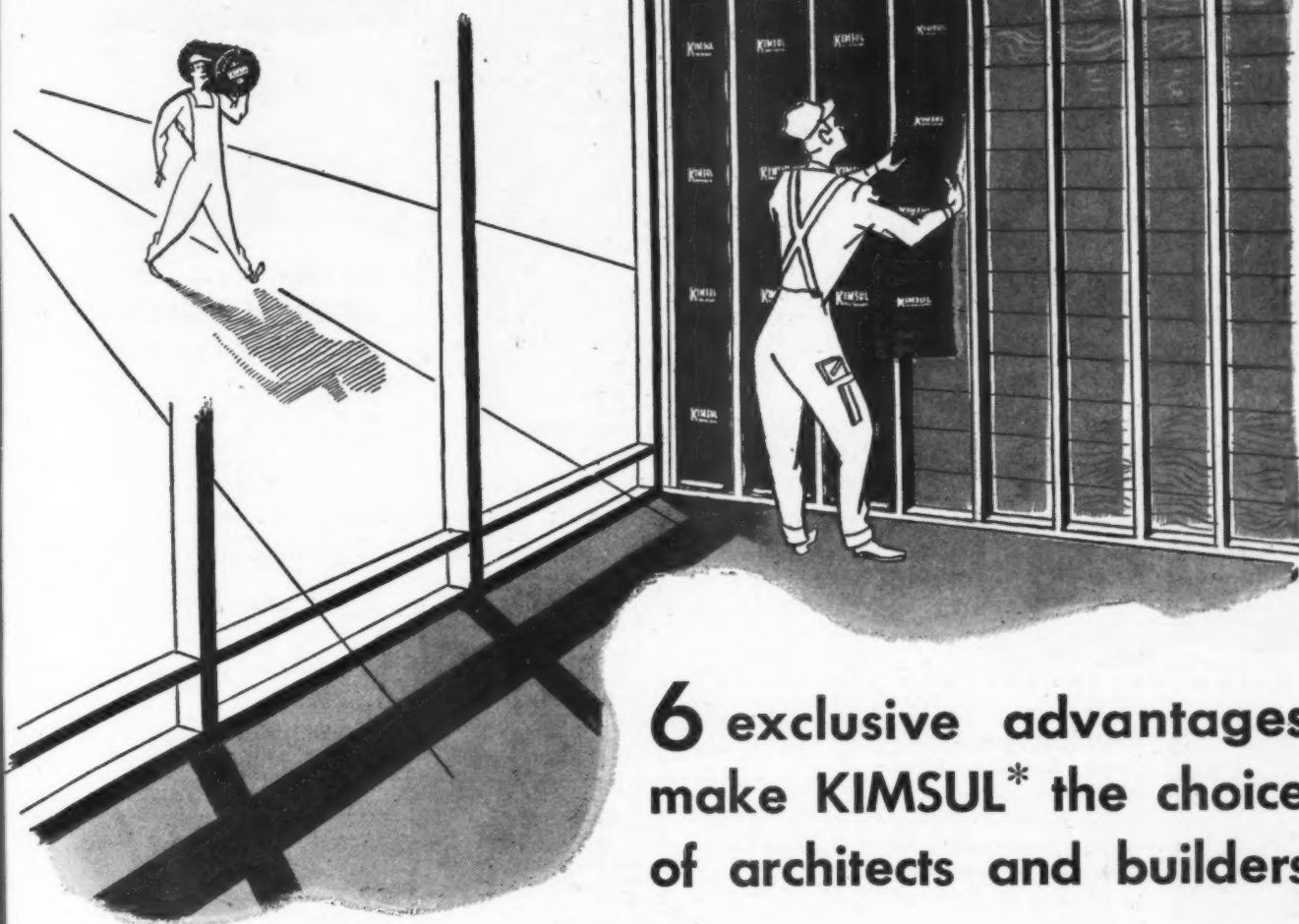
Write for catalog and prices
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6 exclusive advantages make KIMSUL* the choice of architects and builders

KIMSUL insulation resists fire, moisture, fungi and vermin — is termite-proof. Packaged in easily handled rolls and cut to fit standard stud and rafter widths, it can be installed without expensive machinery or skilled labor. It's light in weight, clean, and odorless . . . no irritating dust or sharp particles to injure workmen's skin.



For complete details on how to insulate with easy-to-use KIMSUL, send for this informative Application Data File. Simply forward the request on your letterhead.

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*KIMSUL T. M. Reg. U. S. & Can. Pat. Off.
†PYROGARD trademark

① **Many-Layer Construction.** KIMSUL* insulation is a prefabricated blanket made on the many-layer principle. The many layers create millions of tiny air-cells to give KIMSUL its remarkable insulating efficiency ("k" factor 0.27). And many-layer construction provides dependable, uniform thickness over every square inch of insulated area.

② **PYROGARD† Cover.** Only KIMSUL insulation has the PYROGARD cover — chemically treated, just as the inner layers of KIMSUL are treated, to resist fire.

③ **Compressed Package.** Delivered compressed to 1/5th installed length, KIMSUL saves labor, space, and time.

④ **Extra Width.** The KIMSUL blanket is made extra wide to provide fully insulated fastening edges . . . and to fill extra wide framing spaces.

⑤ **Use For Caulking.** Trimmed pieces of KIMSUL are efficient for caulking around windows and door frames.

⑥ **Flexible Blanket.** Many-layer KIMSUL insulation can be easily tucked around obstructions, fitted into non-standard openings, pulled around corners.

As members of the Producers' Council, Inc., we are cooperating in the Industry-Engineered Housing Program sponsored by the Producers' Council and the National Retail Lumber Dealers' Association.

REZ

for better...easier
...more economical
WOOD FINISHING



REZ Primer and Sealer
...The foundation for all wood finishes. Controls dimensions and provides a perfect hard surface for paint, enamel or varnish.



WHITE REZ Intermediate Coat... A superior undercoat to be applied after sealing the wood with REZ. Makes possible beautiful finishes on softwoods, such as Douglas fir plywood and pine.



HI-GLOSS REZ... A clear, transparent, sparkling surface finish for furniture, built-ins, interior woodwork, millwork, panels, toys, paneling, athletic equipment and all kinds of cabinet work.

Ask your dealer or jobber for further information and copies of new folder, "Wood Finishing"—or write direct to **MONSANTO CHEMICAL COMPANY**, Western Division, Seattle 4, Wash. District Sales Offices in Los Angeles, Calif., and Lockport, N. Y.

Rez: Reg. U. S. Pat. Off.

MONSANTO
CHEMICALS AND PLASTICS

SERVING INDUSTRY... WHICH SERVES MANKIND

(Continued from page 116)

Mich.; Michigan Wholesalers, Inc., Jackson, Mich.; Mott Bros., Rockford, Ill.; New England Panel Co., Everett, Mass.; Norris Wholesale Corp., Madison, Wis.; W. H. Pepkorn Co., Milwaukee, Wis.; Reserve Lumber Co., Cleveland, Ohio; Rockford Wholesale Building Materials Co., Rockford, Ill.; Roofing & Insulation Supply Co., Champaign, Ill.

Smith-Orr Co., Dearborn, Mich.; Stark & Co., Kansas City, Mo.; W. P. Stark Lumber Co., Kansas City, Kans.; Wausau Supply Co., Wausau, Wis.; Wichita Building Material Co., Wichita, Kans.; Wholesale Distributing Co., Moline, Ill.; Wikelund Wholesale Co., Appleton, Wis.; Wilbur Warehouse & Sales Co., West Allis, Wis.; Wisconsin Wholesalers, Inc., Green Bay, Wis.

Cor-O-Aire Announces New Sales Policy

DIRECT sales of its nationally-known gas-fired Hi-Boy furnaces to the trade as a new policy, has been announced by the Cor-O-Aire Heater Corporation of Cleveland, Ohio. Previously this line was sold through distributors only. Cor-O-Aire is manufactured by the Republic Steel Corporation under Cor-O-Aire patents and designs. The latter is also the patent-holding and selling company of the Cor-O-Aire line.



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LAS VEGAS, NEVADA

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Adds and Subtracts
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and
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Your Association can be strengthened, expanded, and effectively capitalize on the publicity, advertising and influence which a Home Show generates in your community. It will bring additional finances for your Association Treasury.

We furnish modern booth equipment—handle all details such as advertising, selling, public relations, and financing. We have a trained organization of experts and specialists in trade exposition showmanship.

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NATIONAL HOME SHOWS, INC.

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HOME OFFICE—DALLAS, TEXAS

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1948 SHOWS

Dallas Oklahoma City Shreveport
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Note clean, modern design of boiler jacket. Standard jacket illustrated. Also available, extended model completely enclosing boiler and burner unit.

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More than a half-century's experience is built into every Spencer Boiler.

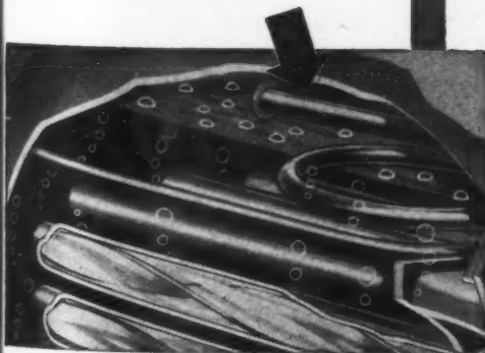
Since 1888, Spencer Boilers have met the test in actual use in homes and buildings everywhere. Heating experts know that they can depend on Spencer's modern design for efficient, economical boiler performance. They have learned to specify Spencer for all heating jobs from a small home to a large building. Architects, builders and heating engineers know, too, that a Spencer Boiler operates efficiently with any type of fuel—coal, gas or oil.

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PATENTED SPENCER COILS—FOR YEAR 'ROUND HOT WATER—

The modern home owner will enjoy Spencer's patented service year 'round water heating method. A special feature of the Spencer design is a cover plate at the top front of the boiler—for quick installation of the copper tube hot water coils. All piping connections are at the rear of the boiler—out of sight. The back of the boiler may be installed close to the wall—out of the way.

Coils are made of copper and bronze. They deliver rustless hot water because service water passing through coils does not come in contact with boiler water at any point.



SPENCER HEATER

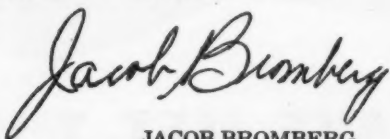
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SERVEL IS THE CHOICE YEAR AFTER YEAR BECAUSE

stays silent

"WAY BACK IN 1933 . . .

we chose Servel for our 56-room apartment house. Thanks to that wise choice, my tenants have enjoyed 15 years of silent, dependable service . . . at very low cost."



JACOB BROMBERG

President of the 6930-62nd Street Corp.
Ridgewood, Long Island, New York



TODAY, with families moving into apartments and housing developments as fast as they're made available, there's a greater appreciation for *silent* refrigeration than ever before. Tenants associate silence with modernity. They reason that every step away from mechanical noise is a step toward happier home life. And the owners and architects want refrigerators that give *dependable, year-after-year service . . . at low cost*. That's why more and more tenants prefer—and more and more owners are ordering—Servel.

Unlike other type refrigerators, Servel operates with no moving parts. A tiny, silent gas flame does the complete job of circulating the refrigerant through the Gas Refrigerator's simpler, basically

different freezing system. There's nothing to make the slightest sound . . . no machinery to wear or break. That's why it costs so little to operate and maintain a Servel . . . why repair and replacement bills remain low.

Besides the famous "no noise, no wear" freezing system, Servel has all the worthwhile, up-to-date cabinet features tenants and owners are looking for, including a big frozen food compartment . . . plenty of ice cubes . . . moist-cold, dry-cold for fresh foods . . . large, flexible interior with adjustable shelves . . . and a host of other modern conveniences.

For installation data and complete information, see Sweet's catalog . . . or write to Servel, Inc., Evansville 20, Indiana.

STAYS SILENT
LASTS LONGER

Servel The GAS

IT'S THE ONLY REFRIGERATOR THAT—

...lasts longer!

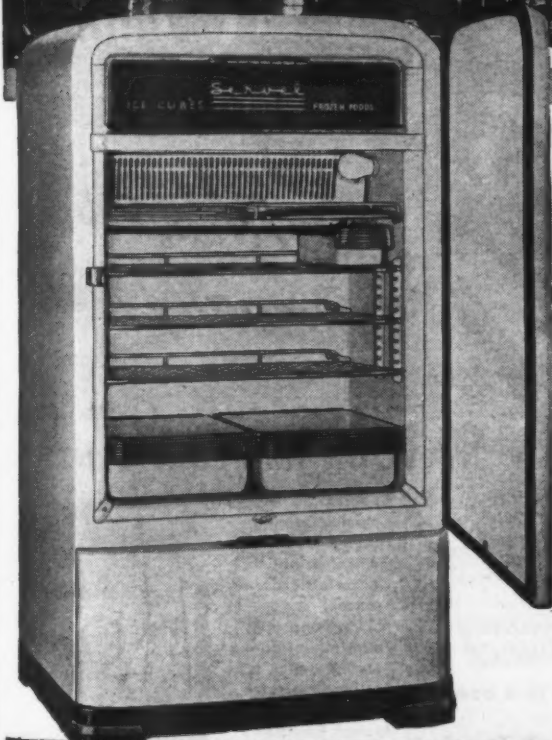
"JUST 12 MONTHS AGO...

we installed 89 new Servels. What sold me on the Gas Refrigerator? Why, no noise, no wear, low operating cost, and longer life, of course."

Morris Lainoff

MORRIS LAINOFF

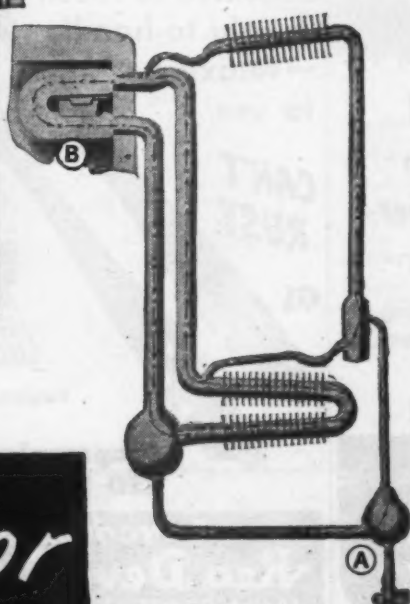
Agent for Kings Tower Realty Co.
1525 E. 26th St., Brooklyn, N. Y.



Here's *WHY* Servel freezes with ...

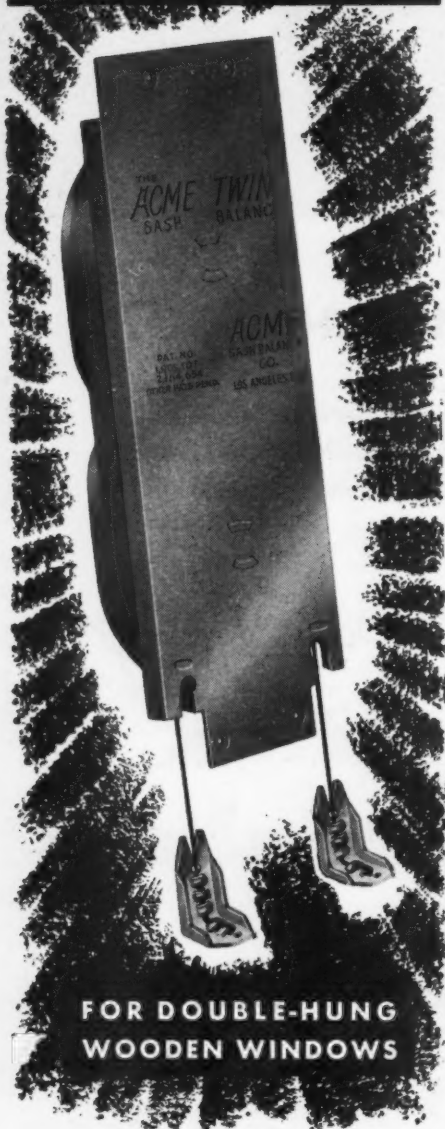
**NO NOISE
NO WEAR**

The refrigerant is hermetically sealed in a set of vessels connected by pipes. A tiny gas flame is applied to the lowest vessel (A). Owing to the evaporation properties of the refrigerant and the law of gravity, ice forms in an upper vessel (B). No machinery—not a single moving part—is needed. Thus, Servel stays silent, lasts longer.



Refrigerator

ACME TWIN SASH BALANCE



FOR DOUBLE-HUNG
WOODEN WINDOWS

**Easier, Faster and
More Economical to
Install than any other
type sash balance.**

See your hardware or building
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for literature.

ACME

SASH BALANCE COMPANY
1626 Long Beach Ave.
Los Angeles 21, Calif.

BERNARD L. JOHNSON DIES SUDDENLY AT SEATTLE

BERNARD L. JOHNSON, former editor of *American Builder*, died suddenly at Seattle, Wash., on Dec. 22, 1947. Mr. Johnson, who was 63 years of age, died of an embolism. News of his passing came as a great shock to his friends and associates. Mr. Johnson was well known in the building industry, having served as editor of *American Builder* for thirty-seven years. In 1942, he resigned as editor to take up residence in Seattle, Wash. He continued his association by serving as western editor. He is survived by his wife, Ruth, two sons, and a daughter. With his passing, the industry has lost a good friend.

All Aluminum Red Devil GLASS CUTTERS

Sensitive to touch
— light to handle
— relaxing
to use.

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RUST**

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**Chapmanized steel
RED DEVIL wheel.**

A Product of
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*Offer Unusual
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In the new Remington Rand electric adding machine, cushioned power gives welcome relief from harsh office clatter. You'll turn out more work with new ease on this quieter, faster model—with its longer, streamlined motor bars and famous 10-key touch-control keyboard. All feature keys are electrified—you add, subtract, multiply directly—as fast as your fingers will move. For full details, call your local Remington Rand representative or Dept. ABU-1, 315 Fourth Avenue, New York 10.



Cushioned Power: Built-in steel cushions reduce noise and vibration—lessen strain on moving parts—insure smoother operation and longer life.

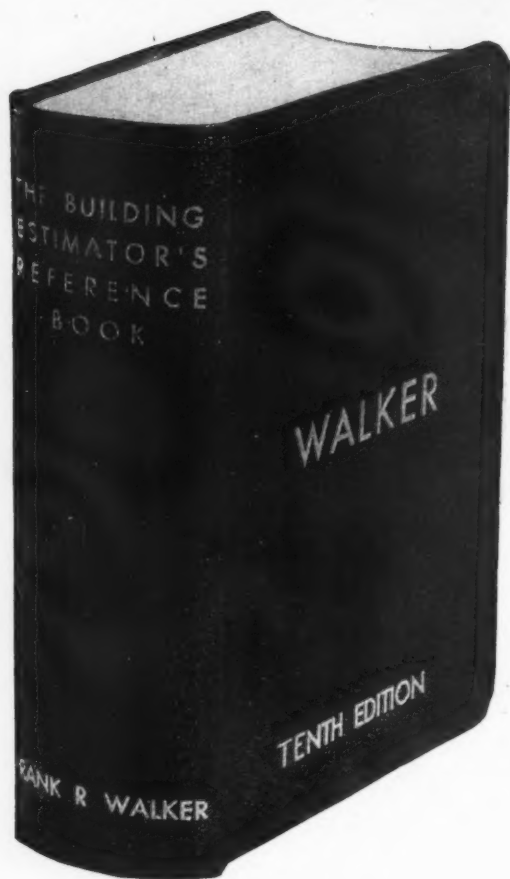
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the new **Remington Rand** electric adding machine

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Excavating, Foundation Work, Reinforced Concrete, Framing, Millwork, Lathing and Plastering, Painting and Decorating, Glass and Glazing, Structural Steel, Masonry, Sheet Metal, Marble and Tile, Heating and Air Conditioning—and many other building subjects.

The new Tenth Edition contains latest estimating and cost data on everything that goes into house construction, from foundation to finish. It can be used in any locality, regardless of local prices or wage scales. It covers all types of small and large building construction.

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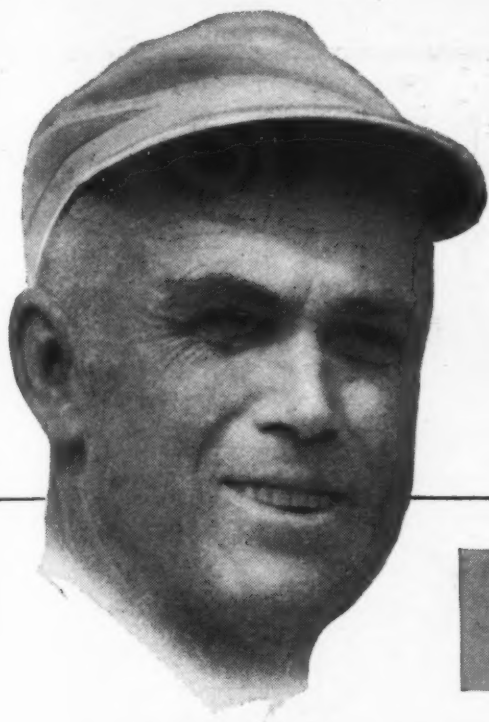
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Supertreated
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● Those are the words of *Norris S. Reber of Mobnton, Pa.* He knows that Supertreated Pol-mer-ik in *sealed-cans* guarantees a factory-fresh product . . . protection from leakage and contamination . . . satisfied paint customers.

Now Supertreated Pol-mer-ik is back, with that important uniformity of quality and the special processing which strengthens its molecular structure . . . making it level smoother, cover better, form a tougher, more weather-tight film.

Painters all over America have built "master" reputations with the help of Supertreated Pol-mer-ik. It is truly the finest linseed oil science has produced.

So get Pol-mer-ik, and you'll get the EXTRA VALUES of Supertreating AT NO EXTRA COST.

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Product of **ARCHER-DANIELS-MIDLAND CO.**

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Send additional information on Supertreated Pol-mer-ik Linseed Oil.

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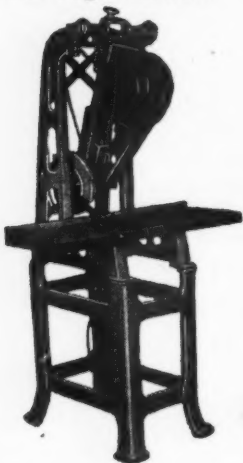
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Wherever exacting performance is required—in the shop or on the job—H & A Woodworking Tools can be used to advantage. Their up-to-date design and high quality workmanship make each tool a long term investment that pays off in increased efficiency . . . lower operating costs . . . and longer service.



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**NEW H & A MODEL 5
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Now equipped with latest Fairbanks-Morse 3/4 H.P. motor. Uses no weights or springs—motor weight balances beam and blade . . . assures free, easy swing . . . automatically returns blade to resting position. An unskilled worker can operate it safely and successfully. Has 10" blade for 3" x 12" capacity. Other models with capacities up to 4" x 14" and 5" x 16".

Write for further information on the complete H & A line of Quality Woodworking Tools.

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Founded in 1921

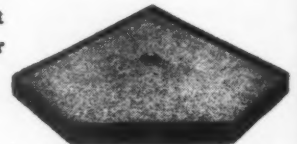
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The strongest foundation for shower wall construction. For installations of tile, marble, slate, plaster, or glass shower walls; eliminates lead pan and double drainage fittings. With a Fiat Precast Receptor installed as part of the plumbing, the tile setter has the most rigid, solid foundation for wall construction obtainable. A built-up shower is no stronger than the receptor on which it is built.

Fiat receptors for built-up showers are leakproof, slip-proof, and non-absorbent, made of Terrazzo (black and white marble chips and white portland cement) cast in one piece with brass drain for 2" waste connection cast integral with receptor.

U. S. Naval Academy at Annapolis has installed 600 Fiat precast terrazzo receptors for marble wall showers.



SQUARE TYPE

STANDARD SIZES

32" x 32"
36" x 36"
40" x 40"

CORNER ENTRANCE RECEPTOR

STANDARD SIZES

36" x 36"
40" x 40"



In Canada—Fiat showers are made by the Porcelain and Metal Products, Ltd., Orillia, Ontario.

Metal Manufacturing Co.

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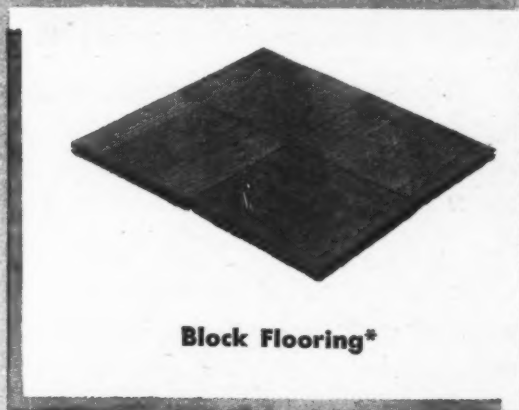


Meet the family of Bruce Products



Strip Flooring*

■ "Just what all does Bruce make?" That question is often asked, so we're giving you the answer on this page. These Bruce Products have two things in common. One is that they are either made of wood or, as in the case of Bruce Floor Finishes and Terminix, developed for the maintenance and preservation of wood. The other is that they are right at the top in their fields. When you recommend or use any of these materials your judgment is backed by Bruce's 35 years of experience and research in flooring and wood products.



Block Flooring*



Hardwood & Yellow Pine Lumber



Floor Maintenance Materials



Terminix

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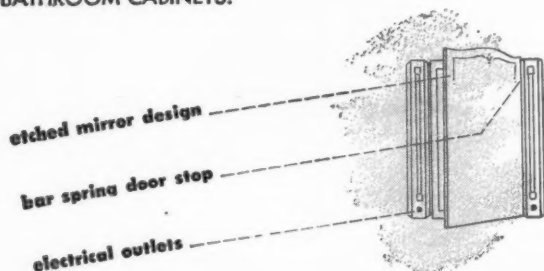
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Most homeowners want a beautiful bathroom but every homeowner needs an efficient one. You can meet all of their demands for beauty and efficiency when you carry the MIRRO-GLO line, specify MIRRO-GLO, and install MIRRO-GLO BATHROOM CABINETS.



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OLD . . . OR FOREVER NEW ?

New materials and new methods are shaping the vigorous and timely architecture of today. And if in some cases the older ways are discarded for the new, let it always be for the sake of more livable, more durable, more beautiful results.

Lime plaster is one of those building materials that have served us through the ages, beautifully and well. It is yet finding its place wherever good buildings are constructed, looking as new as ever in this modern age, just as it has been doing in period after period of the past.

Modern technology has not produced a better way, nor even an equally good way, for finishing interior walls and ceilings. The one-piece construction of lime plaster is air-tight, fire resistant, durable. There is nothing better, nothing just as good.

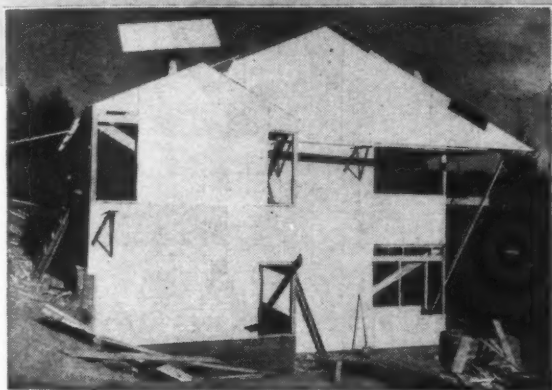
Modern science did one thing however. It improved our methods of processing lime, helped us to make a product of consistently good quality. And so in northern Ohio, in the heart of the world's purest deposit of dolomitic limestone, we are making two brands of finishing lime which are always uniform, always 99½% pure.

Remember these brands. They are easily recognized by the red zig-zag stripes on the bags.

The Ohio Hydrate & Supply Co., Woodville, Ohio



A "Behind the Scenes" Story of DOUGLAS FIR PLYWOOD Advantages



Wall sheathing—5/16" Plyscord, the sheathing grade of Interior-type Douglas fir plywood.



Panels of 3/8" Plyscord sheathed the roof, were covered with hand-split cedar shingles.



Subflooring—5/8" Plyscord. "No squeak or noticeable deflection," say the owners.

Built in '39—Rigid and Tight Today!



"Plyscord...
a wise investment
in many ways..."

THIS attractive Portland, Oregon, home contains plenty of Douglas fir plywood, but it's mostly "behind the scenes"—in wall sheathing, in roof sheathing, in subflooring. Built on a hill-top lot with sweeping view, the house is subjected to sweeping winds as well. Kenneth Striker, the original owner, says: "In spite of the wracking action of the wind, the Plyscord sheathing kept the structure so rigid that after four-and-a-half years there were only four small plaster cracks, due to atmospheric conditions rather than structure. When I build again, Plyscord will be a 'must' in the specifications." The present owners, Mr. and Mrs. John Dierdorff, who purchased the house in 1944, say the house is still rigid and tight, and has required an absolute minimum of maintenance. Architect for the house was Richard Sundeleaf; builder was Julius Zink.

PLYWOOD'S MANY ADVANTAGES KEEP DEMANDS GREATER THAN SUPPLY

Plywood production is greater today than pre-war. But demand is unprecedented. That's why Douglas fir plywood may not always be readily available. Check your regular source of supply for price and delivery information. For technical data, write the Douglas Fir Plywood Association, Tacoma 2, Washington.

Douglas Fir PLYWOOD

LARGE, LIGHT, STRONG

*Real
Wood*

Panels



A SHORT LINE

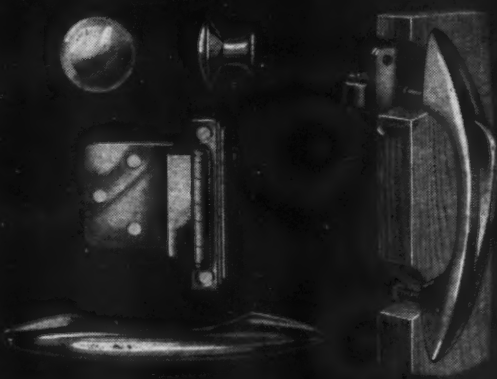


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SMART, CHROMIUM PLATED CABINET HARDWARE by NATIONAL LOCK

• A new "Short-line" assortment that sells fast. Quick turnover. Quick profit. Consists of well-balanced quantities of only 5 items. Chromium plated. Matched in design. Order from your jobber right now! Prompt delivery is assured.



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Card Included FREE
with "Deal"

Included with this fast-selling assortment is a full-color counter card that effectively displays the merchandise. Card is FREE. You pay only for the hardware.



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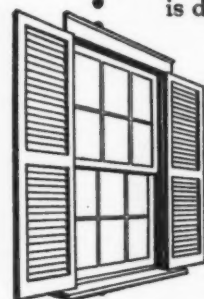
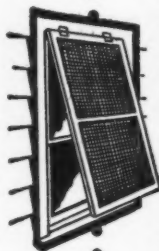
hungry fungi were harnessed



to provide these NDMA STANDARDS

No pains were spared by NDMA in developing reliable tests of toxic preservatives for millwork such as doors, screens, and windows. Hungry fungi—more virulent than are ever likely to be encountered under actual service conditions—were pitted against treated and untreated wood. Wood samples were buried in swamps—subjected unpainted to violent weather conditions...

Out of these tests—out of consultations by eminent scientists—came the six important steps which help to make wood a better building material than ever... supplementing its natural lasting qualities through reliable measurements of toxic treatment efficiency. Here is what NDMA has done—and is doing—to serve the public and you:



1. An efficient test for measuring effectiveness of toxic preservatives.
2. Minimum standards governing the toxic preservative treating of woodwork products.
3. A seal identifying products treated in conformity with NDMA Toxic Preservative Standards.
4. Mill inspection of treating equipment and practices.
5. Laboratory check tests of preservative solutions.
6. Educational effort in the public interest.

NATIONAL DOOR
MANUFACTURERS ASSOCIATION
McCORMICK BUILDING • CHICAGO, ILLINOIS



There's a Whale of a Story behind the Compression Packaging of FIBERGLAS* INSULATION



The new compression packaging of Fiberglas Blankets means added economy for you. Easier to handle! Cuts on-the-job costs! And it puts an end to the nuisance problem of carton disposal.

And there's another story—a whale of a story—behind compression packaging. Rip the bag open. See how the insulation expands! Here is a quick, effective dramatization of the amazing resilience that makes Fiberglas different from any other inorganic insulating

material. See, too, how this resilience makes it easy to fluff this lightweight insulation to full thickness for greater efficiency.

Fiberglas Insulating Wool, consisting of noncombustible, odorless and ageless glass fibers, is available in several forms:—utility batts, pouring wool—and paper-enclosed roll and batt blankets having a self-contained vapor barrier.

For further information, get in touch with one of the four national distributors listed below. Owens-Corning Fiberglas Corporation, Dept. 2018, Toledo 1, Ohio.

*Fiberglas is the trademark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.

AVAILABLE THROUGH 4 DISTRIBUTORS

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FIBERGLAS

BUILDING INSULATION



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PRODUCTS CORP.
Chicago, Ill.



THE FLINTKOTE
COMPANY
New York, N. Y.



KELLEY ISLAND
LIME &
TRANSPORT CO.
Cleveland, Ohio

Universal LEVEL-TRANSIT



MOST PRACTICAL ALL-AROUND BUILDER'S INSTRUMENT EVER DESIGNED!

Highly accurate, amazingly rugged, the Universal Level-Transit does all survey and check-up operations in building and road construction!

Quickly convertible from level to transit, its novel type of design protects parts which were formerly exposed to damage and inaccuracies. Other features include: a patented ball-bearing race, lock and release lever system, and perfect alignment adjustments.

12" Telescope, 25 power, horizontal guarded circle, Verniers to 5 minutes, Vertical arc, 3".

Write today for full details and free booklet "How to lay out building lots."

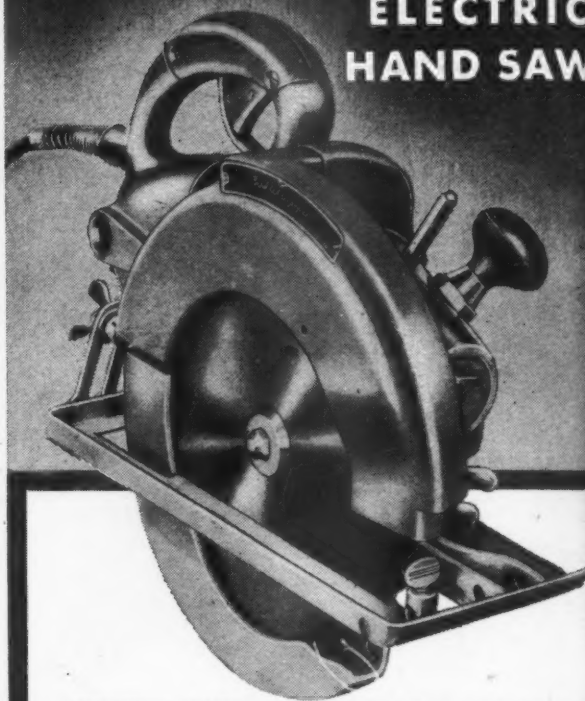
We repair all makes of instruments



**MANUFACTURERS OF
INSTRUMENTS FOR ENGINEERS,
SURVEYORS AND BUILDERS.**
311 West Court St., Milwaukee 12, Wis.

SAVE CUTTING DAYS 3 WAYS

Using **VERSATILE FRED W. WAPPAT
ELECTRIC
HAND SAWS**



PRACTICAL DESIGN. Fred W. Wappat saws are over-powered for fast cutting, yet give thorough operator protection. Their light weight, even balance permit fatigue-free one hand operation—more of the awkward cutting jobs are done quickly. Blower keeps cutting line always visible at the blade, sawdust being kept from operator's eyes by a guard—cuts can always be accurate to the layout and the job done right the first time. Both models feature the famous Fred W. Wappat telescoping blade guard.

MANY USES ON THE JOB. Fred W. Wappat saws operate perfectly in any position, save time by trimming wall or roof sheathing already in place. They can be hung upside down for ripping or, fitted with suitable blades, can cut light gauge metals, stone, brick, tile, cement block, etc.—no need to take the tough or unusual cutting jobs away from the scene of the work.

DEPENDABLE—DAY IN, DAY OUT. Off-the-work repair time and general maintenance is minimized. The special Fred W. Wappat-designed gears are produced under rigid standards. Permanently-lubricated motors are kept cool—running by turbine-driven air currents. All mechanical parts are easily accessible, are lubricated from a single point. Write today for free literature. And if you have a chance, talk to a user of Fred W. Wappat Electric Hand Saws.

High-Speed Portable Electric Tools • Radial Guides • Service and Parts for Wappat and Alta Tools
FRED W. WAPPAT, Inc., 135 Valley St., Mayville, N.Y.
On Chautauqua Lake

There's insulation and there's INSULATION!

Many new homeowners boast that their places are insulated...then get a terrific let-down when they learn that the insulation has been installed so thin that they will get only a fraction of the benefits that home insulation can provide.

That's why we have emphasized two important features about insulation in the ad shown below. In the name of good construction we believe that you will subscribe to these recommended specifications.

NATIONAL GYPSUM COMPANY, BUFFALO 2, N. Y.

(Appearing in full color in the February 21st issue of The Saturday Evening Post.)



You'll build or
remodel better with
Gold Bond

For the newest in building and remodeling products, see your local Gold Bond dealer first.

Puzzle: which house costs less to heat?

The house on the left costs a lot less to heat—the one with the snow on the roof. The snow is still there because this house is insulated with Fireproof Gold Bond Rock Wool. Furnace heat is kept inside instead of leaking through the roof to melt the snow. Heating costs are cut as much as 40%.

Naturally you'll want your new home insulated. But don't make the mistake of just saying you want "insulation". That's like going to the butcher and asking for a pound of meat—any meat. It will pay you to remember two points about insulation:

1. Specify Fireproof Gold Bond Rock Wool. This National Gypsum product is not just "fire-resistant", not just "fire-retarding" but as fire-proof as the rock from which it is made.

2. Specify that you want full thick insulation—not 1 inch or 2 inches thick but full thick. With full thick insulation you get the full benefit that home insulation can and should provide. And because it completely fills the wall, only full thick insulation provides an effective fire stop.

Insulation is the one modern home improvement that pays for itself by reducing heating costs as much as 40% every year. Then during the summer it keeps rooms 8° to 15° cooler. The resale value of the house is automatically increased.

Old homes, too, can be insulated the Gold Bond way. Call your local Gold Bond applicator for a free estimate. He is listed in the phone directory under "Insulation". The easy payments will be

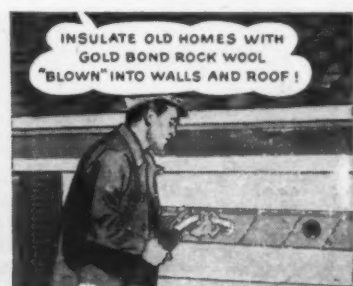
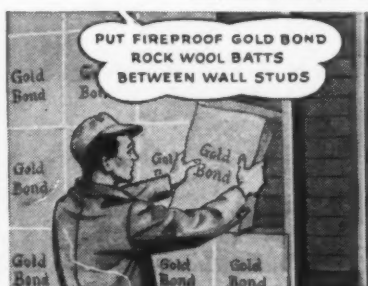
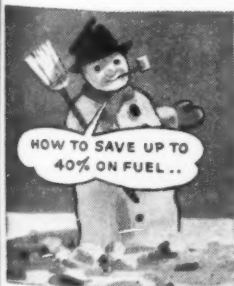
amazingly small because your fuel bills go down immediately.

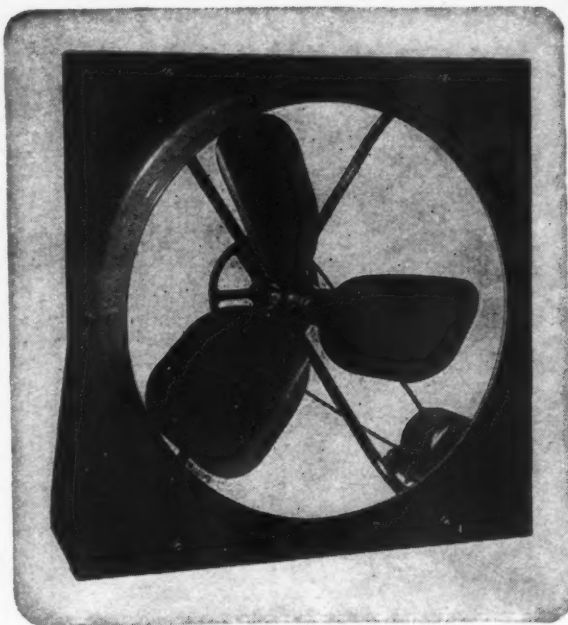
Gold Bond Rock Wool insulation is only one of over 150 Gold Bond Products—engineered to help you build or remodel better at no extra cost. Included are Gypsum Lath, Plaster, Lime, Sheathing, Metal Lath, Insulation, Wallboard, Acoustical Products and Sunflex, the one-hour wall paint.

Your local Gold Bond lumber and building material dealer is headquarters for all that's new in building products. See him first!

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

Gold Bond Building Products add greater fire protection, permanency, and beauty at no extra cost. These include fireproof wallboard, lath, plaster, lime, sheathing, wall paint, insulation, metal and sound control products.



LAU*Moves Air*every home is
MORE MODERNand **EASIER TO SELL** with*"Niteair" Cooling*

Capitalize upon the demand for new, modern comforts and conveniences . . . the BUILT-IN extras that mean extra sales and extra value for you. Install LAU "Niteair" Fans while buildings are being constructed . . . pave the way for future sales while installation costs are lower . . . create interest and desire in your new homes.

Thousands of home owners the nation over are using LAU "Niteair" Fans with outstanding results . . . thousands more are seeking homes with this added convenience already built in.

Try this idea in your very next house so that you can actually "demonstrate" the benefits to your prospects. You will see how easy it is . . . how much more revenue it means.

LAU "Niteair" Fans have been engineered and built to exacting specifications. They operate at extremely low cost with a minimum of noise and maximum output of air movement with reduced power consumption. Their light weight means lower shipping costs.

Write us direct to
Dept. B for speci-
fications . . . or
contact your
jobber. Do
it now!

THE **LAU**
BLOWER COMPANY
DAYTON-7, OHIO



"But this house
has those lovely
windows!"



"Right! What are
we waiting for?"



The sales appeal of Gate City Awning Windows out-pulls that of any other structural improvement yet developed. Just look at these advantages:

- Distinctive architectural design.
- Draft-free, safe ventilation in any weather.
- No danger of rain damaging interior.
- Sash promote natural air circulation.
- Indoor installation of screens and storm sash for safety and convenience. No rain-streaked exterior walls.
- Ease of cleaning from indoors.
- Children can't fall out.
- Positive worm and gear operation with the turn of a small handle. Nothing to lift or move aside.

Gate City Awning Windows are delivered complete, with hardware and glazing installed, and including screens. When the EXTRA advantages are considered, Gate City Awning Windows cost little if any more than conventional sash.

Write today for full information, sizes, etc. Gate City Sash & Door Co., Dept. B, Fort Lauderdale, Florida.

AWNING WINDOWS

by

Gate City



because it has ALL SIX

There are many imitations, but no substitutes for Inselbric—in beauty, in insulation, in life—and above all in consumer demand. For Inselbric's popularity has been justly earned by built-in superiority. It is the only brick siding on the market which provides ALL SIX of these important features.

- | | |
|-----------------------------|---------------------------|
| 1 ENCASED NAILING | 4 PRECISION SHIPLAP |
| 2 ANCHORED FACE | 5 CERTIFIED REGISTRATION |
| 3 COPPER REINFORCED CORNERS | 6 TRADE MARKED PROTECTION |

Just six big reasons why you'll click with Inselbric in '48!



MASTIC ASPHALT CORP.
Makers of Inselbric and Inselstone
 SOUTH BEND, IND. • ELIZABETH, N. J.

JONES & BROWN, INC.
National Distributors of Inselbric and Inselstone
 PITTSBURGH, PA.

Contractors and Builders

1. If you have a problem with water or dampness, THOROSEAL will correct and solve the problem.
2. THOROSEAL is prepared especially to fill and seal voids and cracks, to equalize the absorption in the various units comprising the surface and to make a beautiful, matt-textured finish.

It may be the home or garage!

It may be the cellar!

It may be the cistern or pool!

It may be the dairy barn or milkhouse!

It may be the city water reservoir!

It may be the stable or pens!

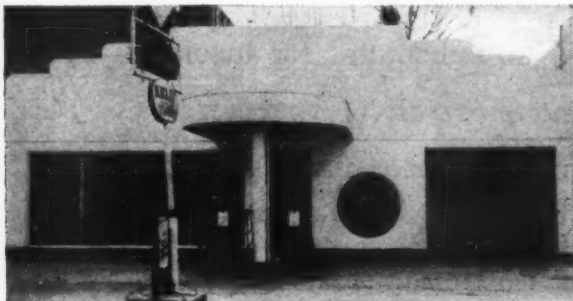
It may be the commercial building!

It may be the factory or warehouse!



This is a 100% THOROSEAL home, not only the interior and exterior, but over the roof. THOROSEAL adds protection and beauty.

Not only the exterior wall surfaces of any type of masonry, including the sills and lintels, the roof, but the interior walls of light manufactured block can be filled and sealed with THOROSEAL and then a beautiful finish coat of QUICKSEAL.



The small commercial building, constructed of lightweight block or brick, can be perfectly sealed and filled with THOROSEAL and then given a delightful finish of QUICKSEAL.

Throughout the United States and Canada, buildings of every type are being protected and beautified with THORO System products.

Write at once for our new and up-to-the-minute Circular No. 17, which describes, in photographic detail, all the methods of The THORO System of protection against heavy rains and storm waters, how to seal the surface of new homes and every type of masonry, on the inside or outside surface, above or below grade.

Request your Lumber or Builders' Supply Dealer in your home city to order for you.

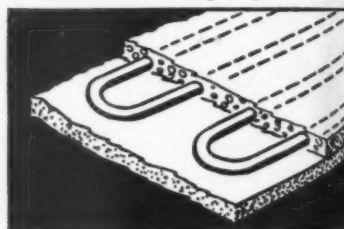
Standard Dry Wall Products, Inc.
BOX N NEW EAGLE, PENNA.

ZONOLITE INSULATING CONCRETE FLOORS



Warm, dry, permanent fire protecting floors are possible when Zonolite Insulating Concrete is used. It is adaptable for basement, ground or upper floors. Floors made from Zonolite Concrete are virtually free from dampness caused by condensation on warm, humid days. Can be placed directly on the ground. Proof against termites, vermin, rats and rodents. Ideal for basementless houses. Conventional flooring, asphalt tile, etc., can be placed over topping.

When *radiant heating* is specified, Zonolite Concrete is doubly important—reduces heat passage into the ground and causes the house to heat more rapidly. Pour the Zonolite Concrete floor first, then lay the heating pipes over it, and cover with a topping of ordinary concrete. The topping heats faster, warming the house sooner, more economically.



Other Zonolite Insulations

● **Zonolite Insulating Fill** simply pours into place. Won't irritate workers' hands, or require wearing masks. Fireproof, rotproof, verminproof. Virtually unaffected by moisture.

● **Zonolite Plaster Aggregate** used in place of sand, makes a 50% lighter-weight plaster easier to mix and work. Resists cracking; insulates against heat, cold, sound. Many times more fireproof than equal thickness of ordinary plaster.

● **Zonolite Acoustical Plastic** opens sound-proofing jobs to you. Simply trowels on walls and ceilings, new work or remodeling. Fireproof.



FREE SEND TODAY FOR DETAILS

UNIVERSAL ZONOLITE INSULATION CO.

Dept. AB-18, 135 S. LaSalle St., Chicago 3, Ill.

MAIL COUPON NOW!

Universal Zonolite Insulation Co.
Dept. AB-18, 135 S. LaSalle St., Chicago 3, Ill.

Please RUSH complete information about ☐ Zonolite Concrete Floors
☐ Insulating Fill ☐ Insulating Plaster ☐ Insulating Concrete

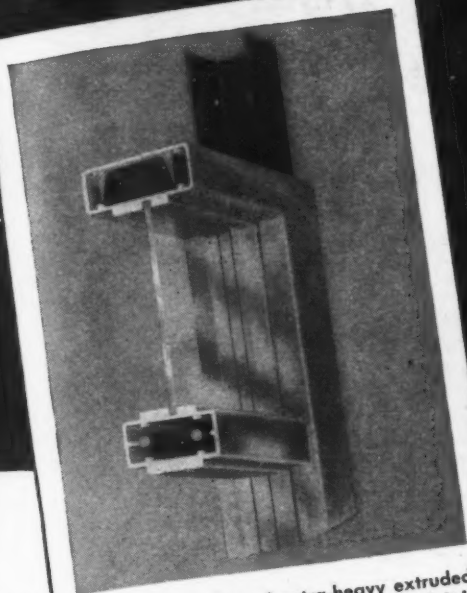
Name.....

Address.....

City..... State.....

Zonolite is Registered Trade Mark of Universal Zonolite Insulation Co.

SEE YOUR LOCAL LUMBER AND BUILDING MATERIAL DEALER



The frame is made of extra-heavy extruded aluminum, highly polished and anodized. It is heavily reinforced with steel channels and tie rods, as partially shown here.

"Pittsburgh's" new **HERCULITE** **DOOR-FRAME ASSEMBLY**

**AVAILABLE IN 12 STANDARD STYLES
TO FILL ALMOST ANY REQUIREMENT**

CONSTRUCTED to accommodate standard Herculite Tempered Plate Glass doors, "Pittsburgh's" new Herculite Door-Frame Assembly is supplied complete with checking floor hinges and top pivots, ready to bolt into the rough building opening. All clearances on the frame and doors are controlled by accurate factory gauges. These features combine to make possible the greatest simplicity of installation. When the building is ready to receive the doors, they are simply set on the hinge pivot, the top pivot is dropped into the top channel, and the entire structure is complete.

This new and unique Door-Frame Assembly is a handsome, rugged and easily installed unit — in a "packaged" construction. It eliminates all problems of setting and fitting; does away with time- and labor-consuming details about clearances and other bothersome matters usually encountered in such installation. It replaces the complicated custom-made frames which required scores of different materials and the services of many trades to install. And there are twelve standard styles available to meet almost any need.

To obtain further information about this revolutionary, prefabricated Herculite Door-Frame Assembly, fill in and return the coupon below. Do it now.

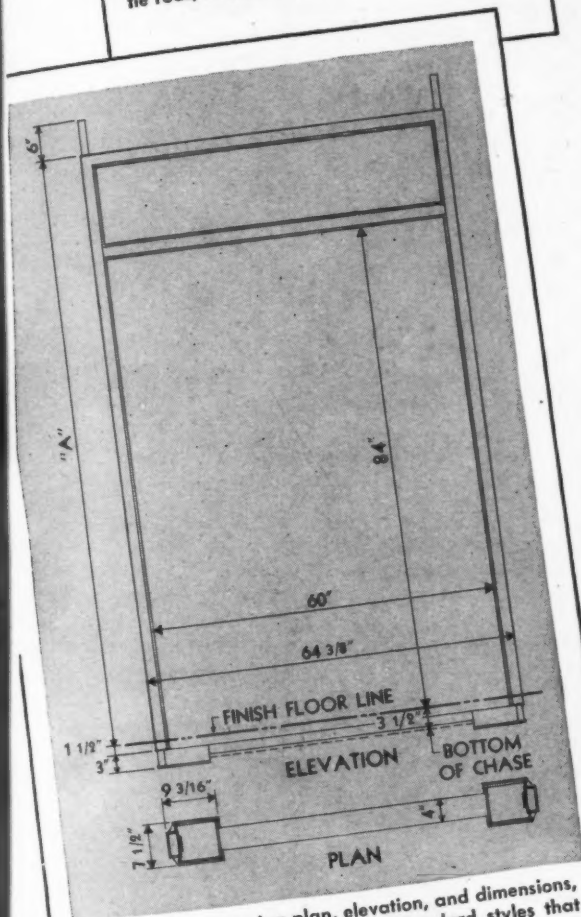
Pittsburgh Plate Glass Company
2032-8 Grant Building, Pittsburgh 19, Pa.

Without obligation on my part, please send me your descriptive literature on "Pittsburgh's" new Herculite Door-Frame Assembly.

Name.....

Address.....

City..... State.....



This diagram, showing plan, elevation, and dimensions, is Style Number 1 of the twelve standard styles that are available.



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY



CONTROLLED COMFORT WINTER or SUMMER

Certified Insl-Cotton, made under Federal supervision, gives *controlled comfort* in any home it insulates—no other type insulation is as efficient in stopping heat and cold. Insl-Cotton is up to 36 per cent more efficient than other types of insulation, yet it is as much as 10 times lighter than many other types (weighs less than 4 ounces per square foot, 3-inch thickness).

That means maximum efficiency—maximum ease of installation, and no strain on the building it insulates. It means fuel savings up to 30 per cent in winter—up to 12° lower temperatures in summer...and *all* this controlled comfort for a lifetime!

TAYLOR MADE
INSL-COTTON
TRADE MARK

*Certified

Every lot manufactured is tested for weight, density, thickness, flame-proof qualities and certified to the U.S. Government. Insl-Cotton will permanently retain its flame-proof qualities—it contains no second-hand material.

and... INSL-COTTON IS

- Flame-proof and fire-retarding
- Moisture resistant
- Sag and settle-proof
- Harmless to handle
- Sound-deadening
- Vermin resistant

INSL-COTTON DIVISION
TAYLOR BEDDING MFG. CO.
TAYLOR, TEXAS

THE ORIGINATORS OF FLAME-PROOF, FIRE-RETARDING COTTON INSULATION

DEALERS DISTRIBUTORS

Some territories still open for competitively priced Insl-Cotton. Write today for details.

MAIL THIS ORDER COUPON Today!

INSL-COTTON DIVISION

Taylor Bedding Mfg. Co., Taylor, Texas

Gentlemen:

Please send specifications and full information on INSL-COTTON.

Name _____

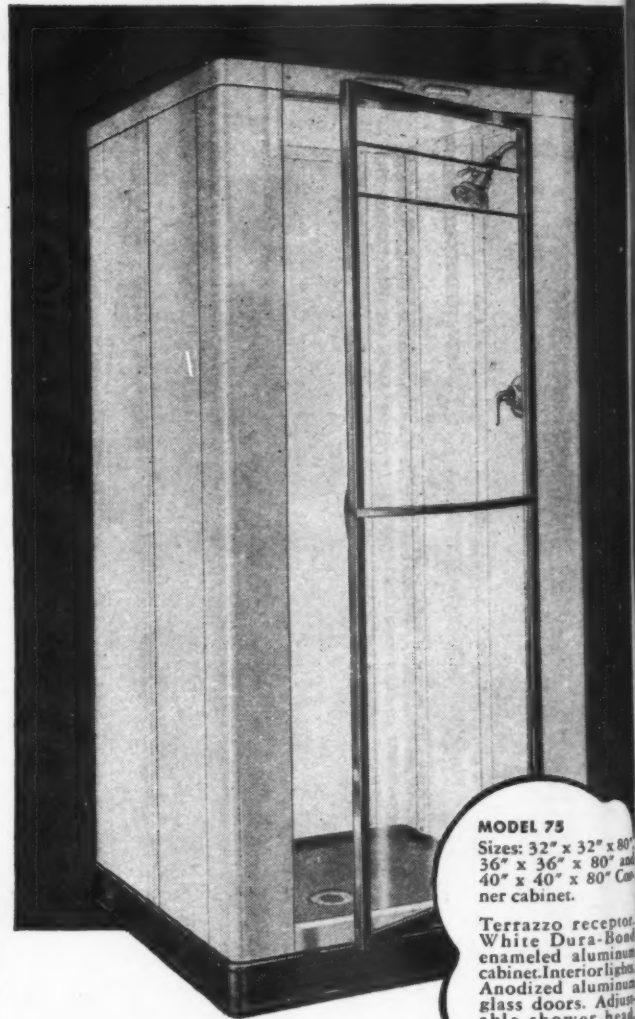
Address _____

City and State _____

Check Here: ☐ Distributorship ☐ Architect ☐ Contractor.

Quality is here in **TILETONE'S** **MODERN DESIGN** **SHOWER CABINETS** Model 75

Here is quality in shower cabinets that's never been known before. Tiletone has designed new modern machinery to manufacture shower cabinets of MODERN DESIGN! Tiletone's Model 75 is the result of better manufacturing methods. It's unexcelled in quality with improved receptor base—longer lasting finish.



MODEL 75

Sizes: 32" x 32" x 80",
36" x 36" x 80" and
40" x 40" x 80" Corner cabinet.

Terrazzo receptor. White Dura-Bond enameled aluminum cabinet. Interior lights. Anodized aluminum glass doors. Adjustable shower head. Dial type mixing valve.

TILETONE
Shower Cabinets

TILETONE COMPANY

2323 WAYNE AVENUE • CHICAGO 14, ILLINOIS

Why you build a better house with ARKANSAS SOFT PINE



Satin-like Interior Trim takes paint and enamel without bleeding or raised grain.



Soft texture and attractive figure enhance natural or stained effects.



Good taste in a simple panel design installed in clear Arkansas Soft Pine.



Framing material works easily and fast. Nails without splitting — stays put.

Every builder likes to work wood of soft texture that cuts easily. When you find such texture in a wood which takes paint without bleeding, discoloration or raised grain, you have the exact qualities needed for beautiful interior woodwork and paneling, and for well-groomed exterior trim. When you find such texture in framing lumber, plus adequate strength, protected by correct drying and seasoning, you have the exact qualities for a workmanlike structure that stays plumb, free from shrinking and swelling.



Identified by registered trade mark which warrants standard manufacture and correct seasoning to approved moisture content, ARKANSAS SOFT PINE supplies you with a thoroughly trustworthy building wood for every item from foundation plates to satin-like interior trim and mouldings.

ARKANSAS SOFT PINE is sold by local retail lumber yards and planing mills east of the Rockies. For further information address:

ARKANSAS SOFT PINE BUREAU
148 BOYLE BUILDING LITTLE ROCK, ARKANSAS

ARKANSAS SOFT PINE provides *all* these qualities! Inherent in its natural growth are soft texture for ease in working; tough resilient fiber for resistance to splitting and wear; freedom from pitch for taking enamel and paint uniformly and holding their life and lustre with no discoloration or raised grain; attractive figure for stained or natural woodwork or paneling . . . the sum of which is a superior wood of correctly balanced soft texture for framing, finishing and beautifying homes.

Send for
Your
FREE COPY

Complete information including construction details, stress tables, grades to specify, etc., are contained in this Builders' Handbook which is yours for the asking. Write for your copy today.



What do your Flooring Specifications call for on jobs like these?

RANCH HOUSE DEVELOPMENT...



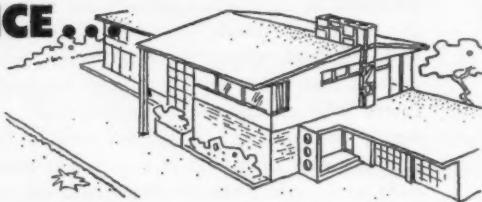
Basementless, concrete slab construction. More and more cost-conscious operative builders are turning to Tile-Tex® Asphalt Tile as the all purpose flooring for a one story ranch house. It's low in cost, has an amazing record of long life . . . and is the only type of resilient flooring which can be installed with perfect safety over a non-waterproofed concrete slab. No other sub-flooring required. Can be installed in gay, colorful patterns or solid tones. Appeals to home owners because it can be used with or without rugs or carpeting.

BLOCK OF STORES...



On the main street of town, where store traffic is heavy, and tenants require different decorative effects. With Tile-Tex Asphalt Tile you can offer the commercial user an almost endless variety of designs, patterns and custom accessories around which to plan colorful and functional floors. Yet your client pays no maintenance penalty for high style. Tile-Tex is exceptionally easy to clean and keep clean.

RESIDENCE...



Two stories and a basement, for upper income purchaser. For kitchen, bathroom, basement recreation room, foyer, children's bedrooms . . . specify Tile-Tex Asphalt Tile, by all means. It's the right floor for heavily used areas. It brings bright, spirit-lifting color to many areas of the home. It lightens the cleaning burden. And it helps sell your homes.

★ ★ ★ ★

Tile-Tex Asphalt Tile is installed by expert flooring contractors located in principal cities and towns. Write The Tile-Tex Company, Inc., (subsidiary of The Flintkote Company), Chicago Heights, Illinois for the name of the flooring contractor nearest you. Sales offices in Chicago, New York, Los Angeles and New Orleans.

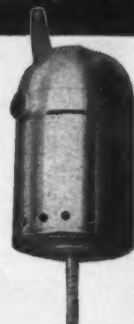
THE TILE-TEX CO., Inc.
CHICAGO HEIGHTS, ILLINOIS

*REGISTERED TRADEMARK OF THE TILE-TEX COMPANY

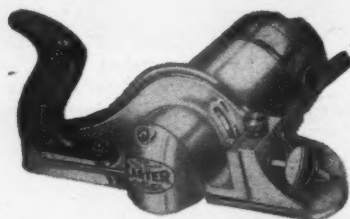


FINISH WEATHERSTRIP JOBS FASTER — with Stanley-Carter Electric Tools

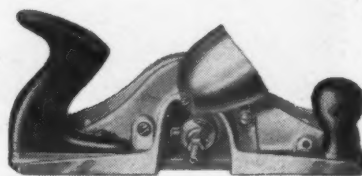
THIS POWERFUL MOTOR
— $\frac{3}{4}$ H.P. Universal type—built for continuous operation on either A.C. or D.C., 60 cycles or less. 18,000 RPM.



IN EITHER



WASP PLANE — doubles as a plane and weatherstrip groover — literally shears wood fibers leaving a smooth waveless surface. Has hundreds of uses — fitting doors drawers, storm and window sash, screens, shutters, outside trim. With weatherstrip cutters it cuts grooves accurately and quickly.



WEATHERSTRIP GROOVER — for plow cuts in sash, doors or transoms — produces smooth, quick, clean work at all times.

FOR
EXTRA SPEED and PROFIT ON
ANY WEATHERSTRIPPING JOB

STANLEY

Reg. U.S. Pat. Off.

HARDWARE HAND TOOLS · ELECTRIC TOOLS

SEND FOR FREE BOOKLET

STANLEY ELECTRIC TOOLS, Stanley -Carter Sales Division
534 Myrtle Street, New Britain, Conn.

Gentlemen: Please send me free folder about Stanley-Carter Weatherstrip Tools.

Name
Firm name
Street
City State

This Improved Construction Assures a Permanent

DRY WALL

at Minimum Material and Labor Cost!



**VAPOR SEALS
FROM THE INSIDE!**

Reflective Sisalation prevents passage through sidewalls of harmful moisture-vapor. Provides adequate insulation at no extra cost!

**WEATHER SEALS
FROM THE OUTSIDE!**

Tough Sisalkraft building paper over sheathing prevents passage of wind-driven rain into walls.

See for Yourself: New wall construction, utilizing the prime features of Sisalkraft and Sisalation, now enables you to stop the passage of harmful moisture into walls, easily and economically. This simple method provides a permanently DRY WALL in homes PLUS all the advantages of effective INSULATION at no extra cost!

Write today for further information about these two products.

The SISALKRAFT Co., Dept. AB, 205 W. Wacker Drive, Chicago 6, Ill.



Why Do It The HARD WAY?



HERE'S WHY...

1. **RECOGNIZED PUBLIC ACCEPTANCE**
Completely invisible...known quality leadership...backed by nation-wide advertising, it's easier to sell.
2. **EASE OF OPERATION**
Finger touch control with full opening of both upper and lower windows appeals to every customer.
3. **SIMPLIFIED INSTALLATION**
Just drive in two fasteners...screw in one screw...10 sizes fit 95% of all new or old windows.
4. **LOWER COST**
Eliminates weight boxes and mortises. No special frame preparation.
5. **NOTHING TO EXPLAIN AWAY**
No tapes...no cables...no exposed tubes...no corrosion...no sticking...no squeaking.

ADVERTISED TO 134,445,000 READERSHIP
IN SUCH CONSUMER MAGAZINES AS—



Better Homes and Gardens,
American Home, Farm Journal,
Small Homes Guide, etc. . . the
bulk of the home building market.

FOR COMPLETE SPECIFICATIONS AND INSTRUCTIONS

Write today for new fully illustrated, specification and installation catalog. See how Grand Rapids Invisibles fit into your next set of plans!



GRAND RAPIDS HARDWARE COMPANY

Grand Rapids, Michigan

Quality Leaders in Sash Hardware for 50 Years



Grand Rapids Sash Pulleys

No. 103 face plate, cone bearing type and Nos. 175, 109, 110 sawtooth drive type sash pulleys cover 95% of all sash pulley requirements.



Now PRACTICAL OIL HEAT for SMALL HOMES

The Kresky Automatic FLOOR FURNACE

Listed by
UNDERWRITERS'
LABORATORIES



**NO
BASEMENT
REQUIRED
•
DUAL WALL
OR FLOOR
REGISTER**

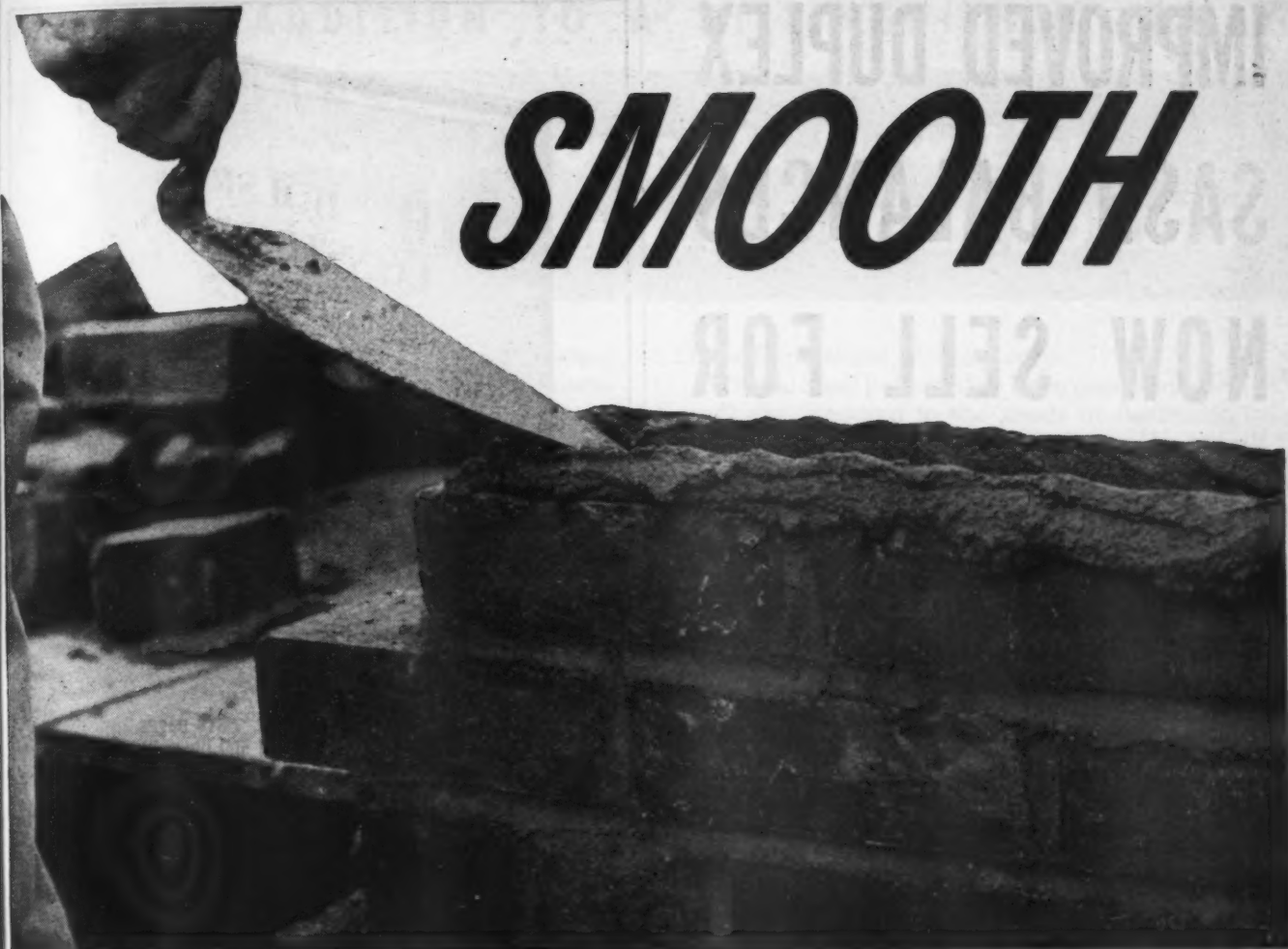
- Kresky patented mechanical air induction assures instant, clean heat...dependable performance.
- Forced air circulation...automatic control.
- Exceedingly low oil consumption meets the problem of restricted fuel conditions...one reason for the unprecedented demand for Kresky today.
- Simplicity itself, Kresky requires practically no servicing. "Kickproof" for the builder...real satisfaction for the owner.

WRITE FOR FOLDER AND NAME OF
LOCAL DEALER

KRESKY MFG. CO., INC.

Pioneers in Oil Burning Equipment since 1910
PETALUMA, CALIFORNIA

SMOOTH



ATLAS MORTAR CEMENT rates high in plasticity. It has a fat, rich consistency. It's buttery...it's *smooth*. Trowels travel fast and easy in Atlas Mortar Cement. It helps masons produce a clean, workmanlike job.

High, too, is the *yield* of Atlas Mortar Cement. The large number of brick, block, tile and other units laid up with the resultant mortar may represent profitable savings to contractors, especially on large jobs.

Atlas Mortar Cement also is outstanding in all other desirable characteristics—water retention, volume change, color, strength and durability. It is backed by years of research. It complies with Federal and ASTM specifications for masonry cement.

Send for descriptive circular. Write Universal Atlas Cement Company, (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

OFFICES: Albany • Birmingham • Boston • Chicago • Cleveland • Dayton • Des Moines • Duluth
Kansas City • Minneapolis • New York • Philadelphia • Pittsburgh • St. Louis • Waco

AS-MC-14

SKILLED HANDS PREFER

ATLAS MORTAR CEMENT

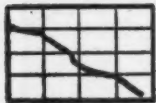
THE SATIN OF MASONRY CEMENTS



"THE THEATRE GUILD ON THE AIR"—Sponsored by U. S. Steel Subsidiaries—Sunday Evenings—ABC Network

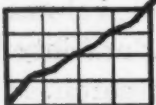
IMPROVED DUPLEX SASH BALANCES NOW SELL FOR LESS THAN IN 1938!

**Direct Saving to Builders
Means More Profit, Helps
Offset Other High Costs**



DUPLEX BALANCE COST DOWN

In an era of greatly increased costs, it is a noteworthy fact that Duplex Flat Sash Balances actually sell today at a substantially lower price than they did in 1938. By comparison, think of the cost increases in some of the other typical items you buy.

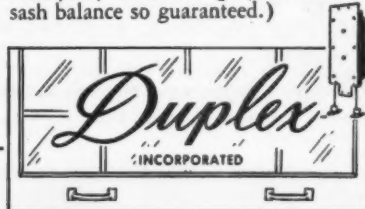


DUPLEX BALANCE QUALITY UP

Although they now cost less, Duplex Flat Sash Balances are worth more than they were nine years ago, in at least three important respects:

1. The plaster-tight outer case is now made of rust-proof plated stock, whereas it formerly was painted.
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3. Duplex Sash Balances are now guaranteed against mechanical defects for the life of the building. (The FIRST sash balance so guaranteed.)

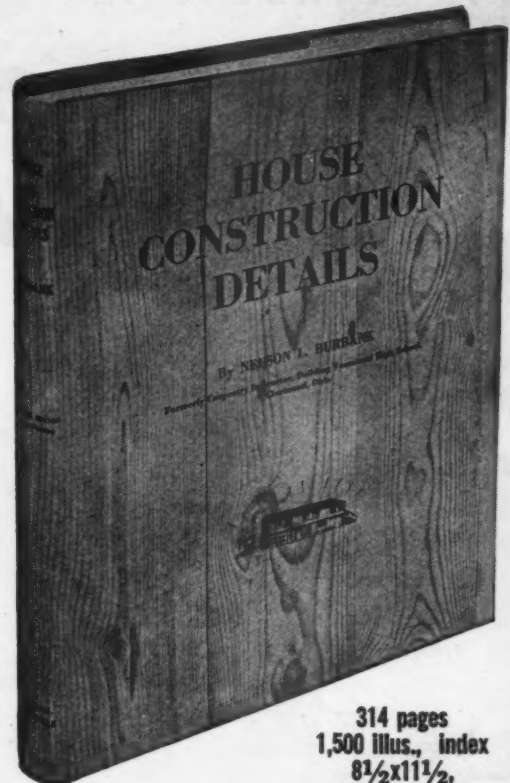
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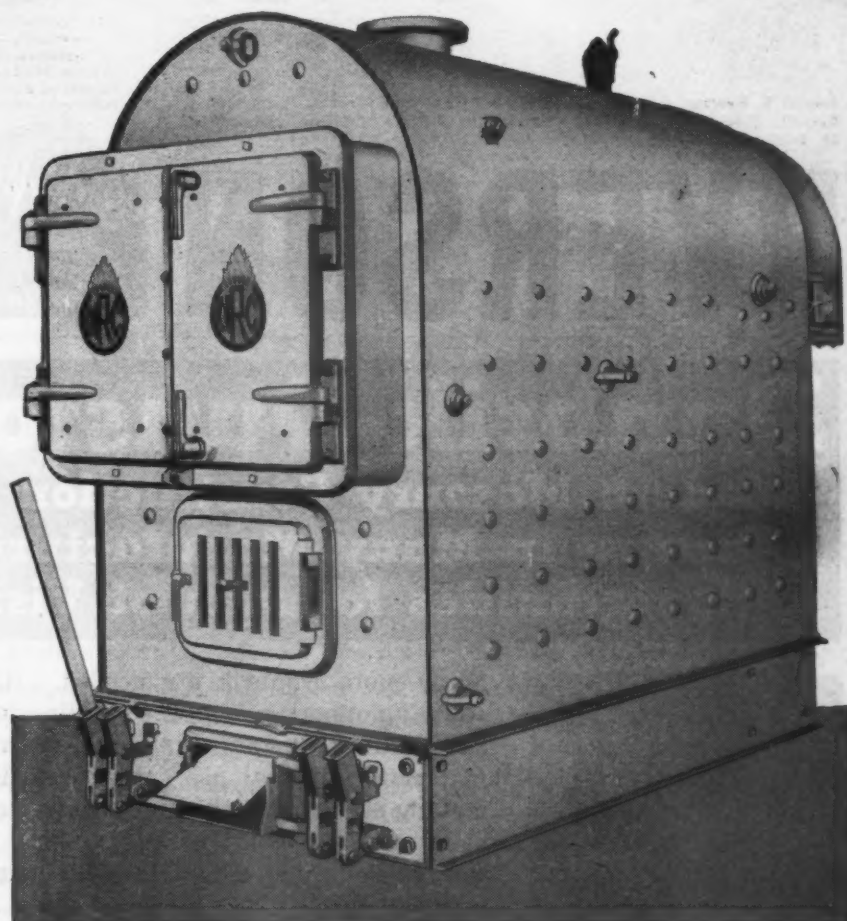
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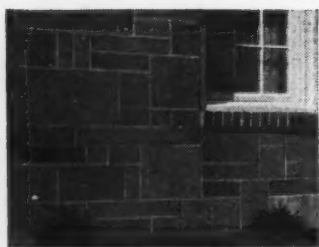
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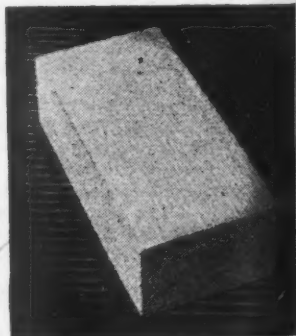
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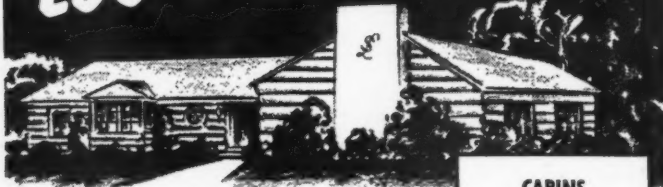
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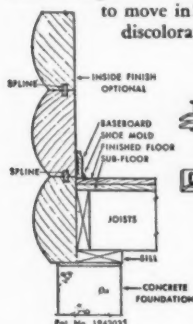
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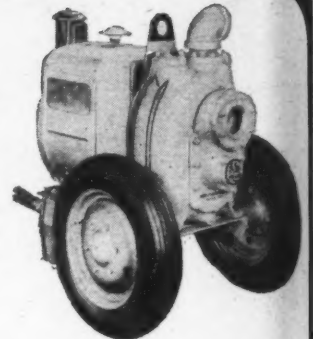
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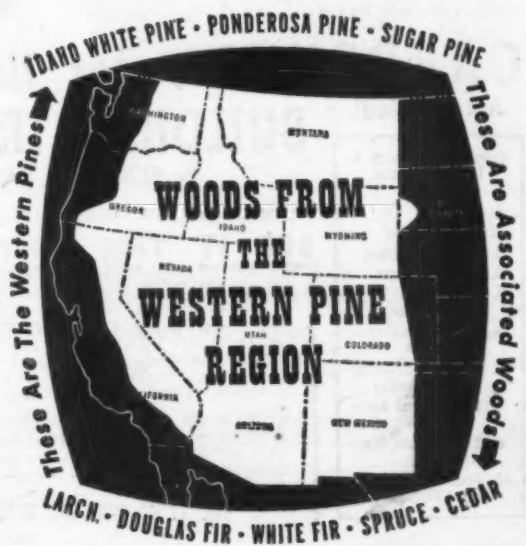
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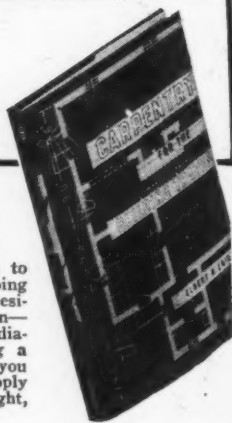
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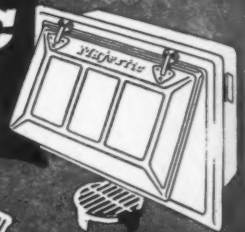
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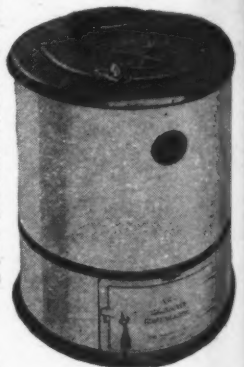
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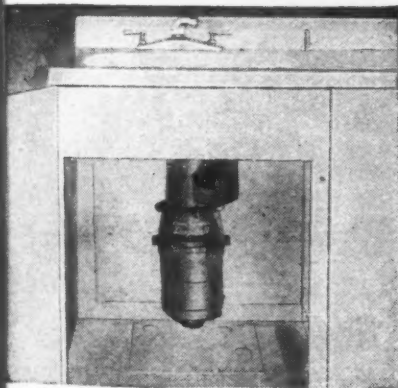
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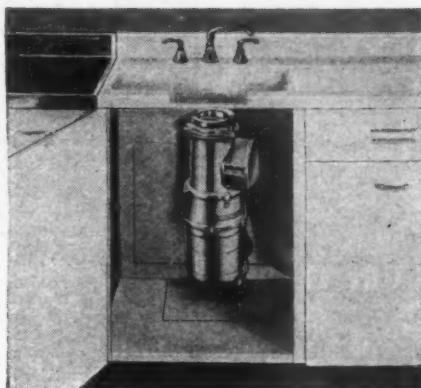
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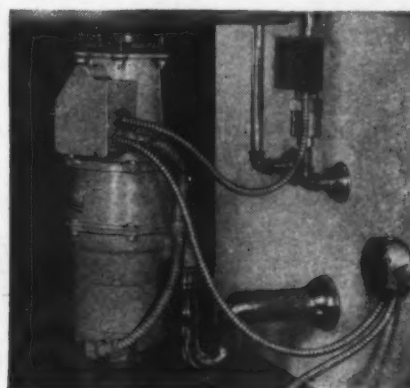
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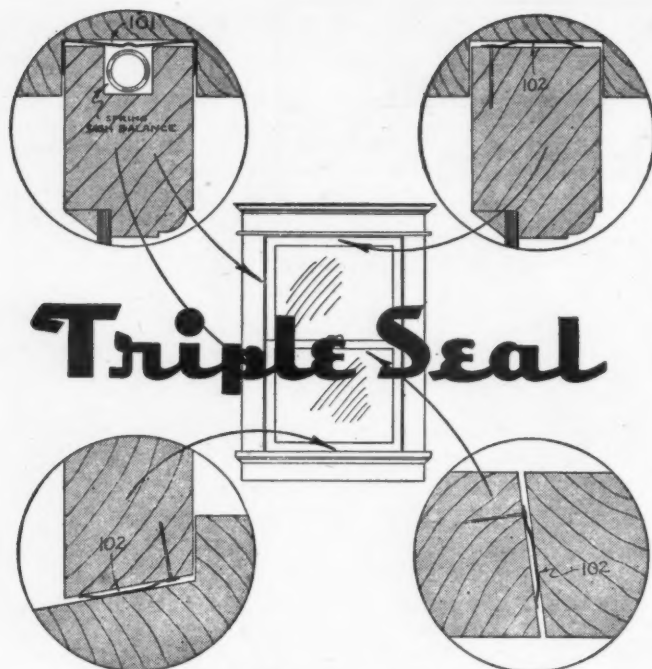


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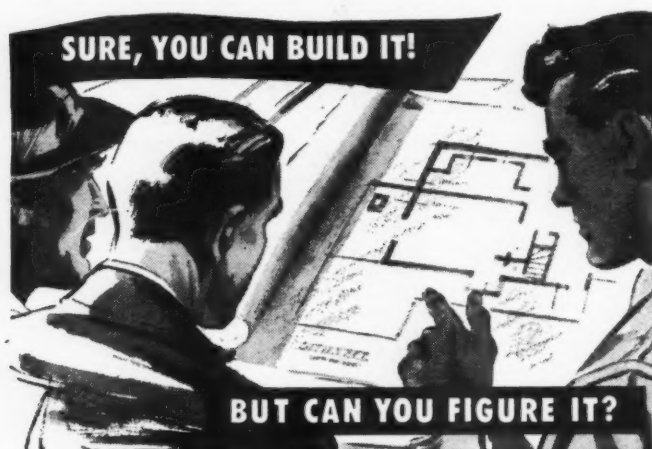
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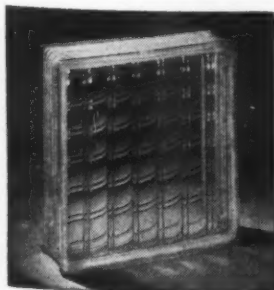
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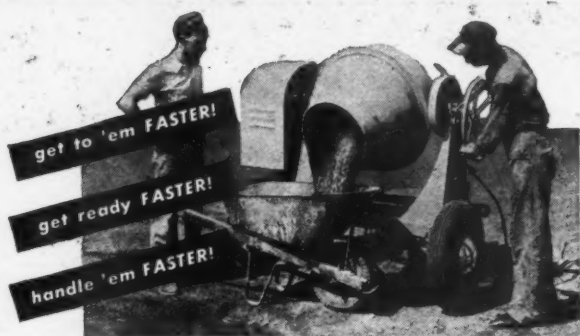
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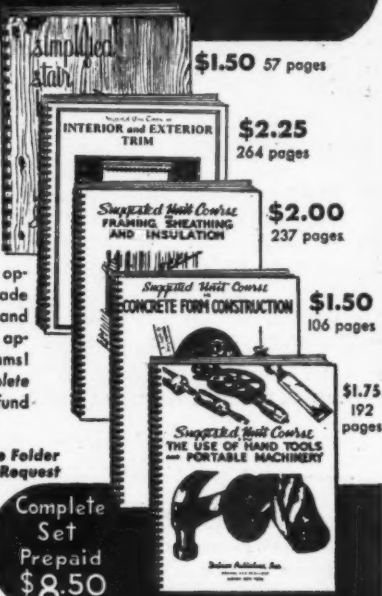
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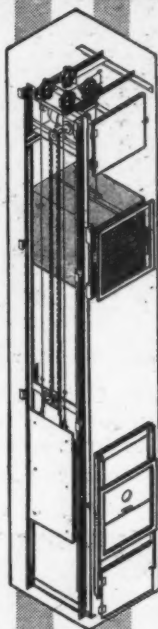
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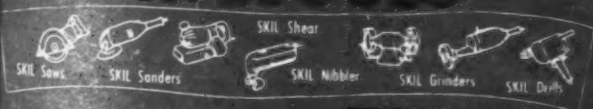
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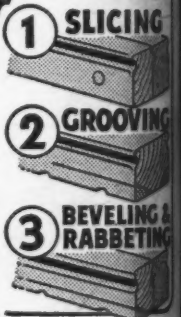
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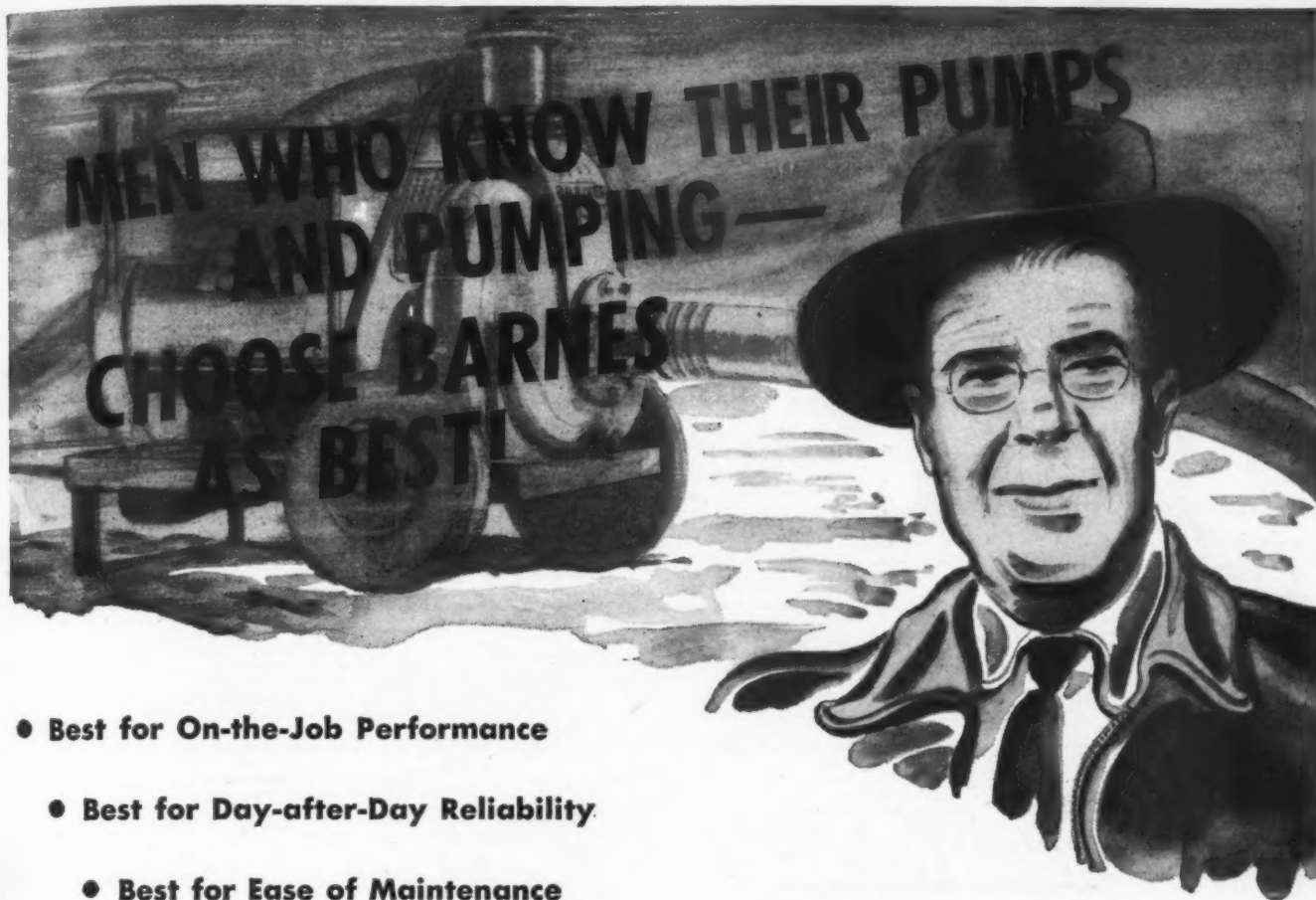


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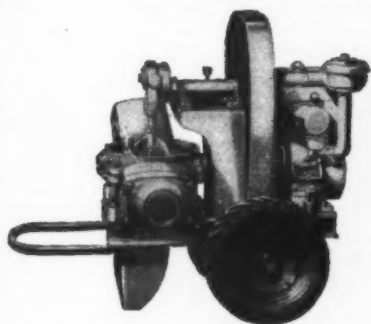
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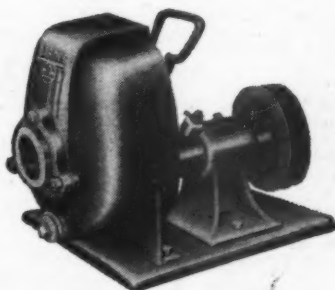
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